CDP-S3

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model

Ver 1.0 2001.04

CDP-S3 is the CD player section in MHC-S7AV or MHC-S3.

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM63B-30BD60
Base Unit Name	BU-30BD60
Optical Pick-up Name	OP Assy (A-MAX.3)

SPECIFICATIONS

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
OPTICAL OUT (Square optical connector jack, rear panel)	
Dimensions (w/h/d)	Approx. 280 x 108 x 330 mm
Mass	Approx. 2.7 kg

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

9-873-831-11
2001D0500-1
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Sony Corporation
Home Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveforms is output three times.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board. (within 3 times)
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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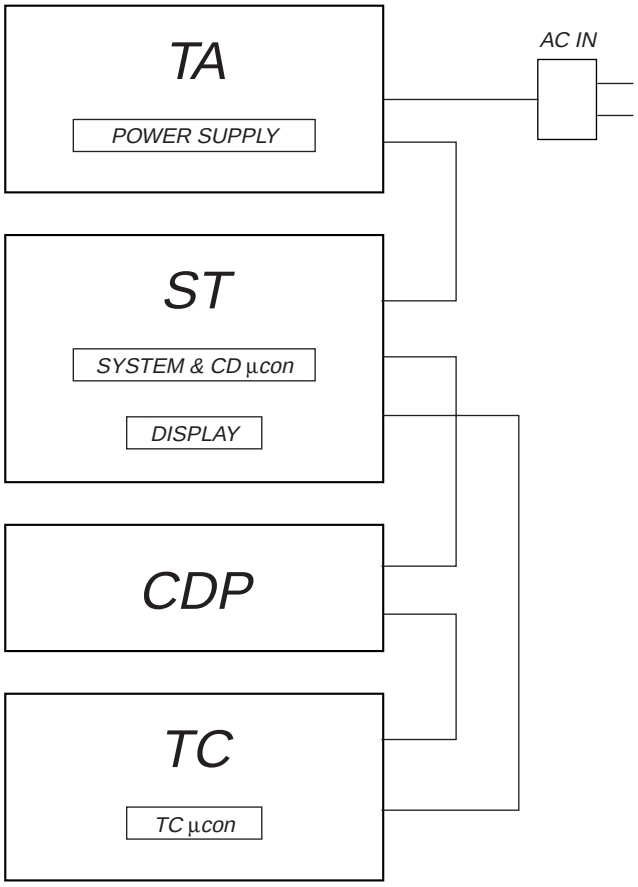
SECTION 1
SERVICING NOTES

This set is a component of the MHC-S7AV or MHC-S3.
The MHC-S7AV or MHC-S3 system configuration is as shown below, and therefore it does not operate normally unless all four components are connected.
In performing the repair, connect all components with the system cables.
Note: The precaution to the users is described on the label stuck on the back panel (CD player) and in the troubleshooting section in the Operation Manual.

System Configuration:



CD-TEXT TEST DISC

This unit is able to display the test data (character information) written in the CD on its fluorescent indicator tube.
The CD-TEXT TEST DISC (TGCS-313:4-989-366-01) is used for checking the display.
To check, perform the following procedure.

Checking Method:

1. Press the I/⏻ button to turn the power on, set the disc to the disc table with the "test disc" label facing up, and chuck the disc.
2. Press the CD button to set CD function, and press the ◄◄ ►► button to playback the disc.
3. The following will be displayed on the liquid crystal display.
   Display : 1KHZ/0DB/L R
4. Pressing the –⏮ or ⏭+ button, select the track. The text data of each track will be displayed.
   For details of the displayed contents for each track, refer to "Table 1 : CD-TEXT TEST DISC TEXT Data Contents".

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it.

Table 1 : CD-TEXT TEST DISC TEXT Data Contents (TRACKS No. 1 to 20:Normal Characters)

TRACK No.	Displayed Contents
1	1kHz/0dB/L&R
2	20Hz/0dB/L&R
3	40Hz/0dB/L&R
4	100Hz/0dB/L&R
5	200Hz/0dB/L&R
6	500Hz/0dB/L&R
7	1kHz/0dB/L&R
8	5kHz/0dB/L&R
9	7kHz/0dB/L&R
10	10kHz/0dB/L&R
11	16kHz/0dB/L&R
12	18kHz/0dB/L&R
13	20kHz/0dB/L&R
14	1kHz/0dB/L&R
15	1kHz/–1dB/L&R
16	1kHz/–3dB/L&R
17	1kHz/–6dB/L&R
18	1kHz/–10dB/L&R
19	1kHz/–20dB/L&R
20	1kHz/–60dB/L&R

Note: Track No. 21 to 99 are not displayed.

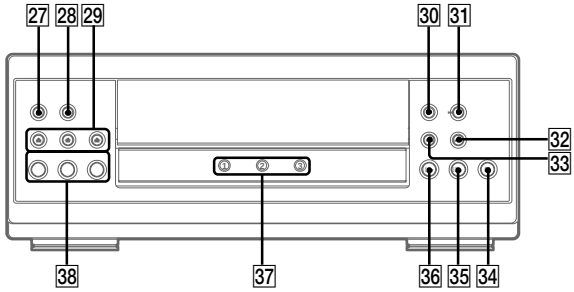
SECTION 2
GENERAL

This section is extracted from instruction manual.

Parts Identification

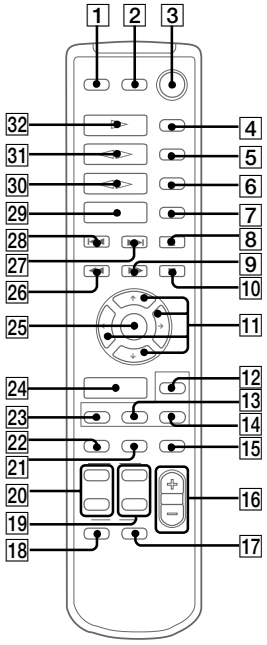
The items are arranged in alphabetical order.
Refer to the pages indicated in parentheses ( ) for details.

Main unit



DISC 1–3 38 (14, 15, 21)
DISC 1–3 indicators 37
DISC 1–3 ⏏ (eject) 29 (14)
PLAY MODE 27 (14, 15, 21)
REPEAT 28 (14)
► (play) 36 (14, 15)
❚❚ (pause) 35 (14)
■ (stop) 34 (14, 20)
⏮ (go back) 33 (14, 15, 21)
⏭ (go forward) 32 (14, 15, 21)
◀◀ (rewind) 30 (14)
▶▶ (fast forward) 31 (14)

Remote Control



CD ▻ 32 (14, 15)
CHECK 5 (15)
CLEAR 6 (15)
CLOCK/TIMER SELECT 17 (30)
CLOCK/TIMER SET 18 (13, 21, 29)
DBFB 15 (23)
DISPLAY 22 (13, 16, 18, 29, 35)
D.SKIP 4 (14)
ENTER 25 (10, 12, 13, 15, 17, 18, 21, 22, 26–30)
EQ 13 (27)
EQ ON/OFF 14 (10, 28)
FUNCTION 24 (10, 14, 15, 20, 21, 31)
GROOVE 21 (23)
SET UP 12 (10, 12, 26, 28, 29)
SLEEP 7 (29)
SUR 23 (25)
TAPE A ◅▻ 31 (19, 35)
TAPE B ◅▻ 30 (19, 20, 35)
TUNER/BAND 29 (17)
TUNING + 9 (17)
TUNING – 26 (17)
TV CH +/– 19
TV VOL +/– 20
TV I/⏻ 2
TV/VIDEO 1
VOL +/– 16

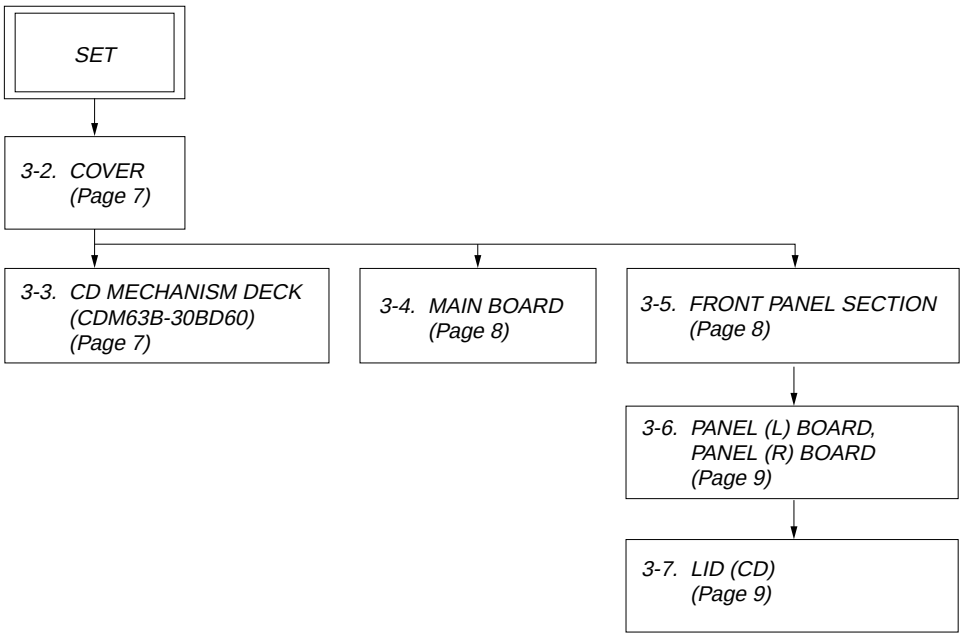
BUTTON DESCRIPTIONS

I/⏻ (power) 3
❚❚ (pause) 10
■ (stop) 8
⏮ (go back) 28
⏭ (go forward) 27
◀◀ (rewind) 26
▶▶ (fast forward) 9
↑/↓/←/→ 11

SECTION 3
DISASSEMBLY

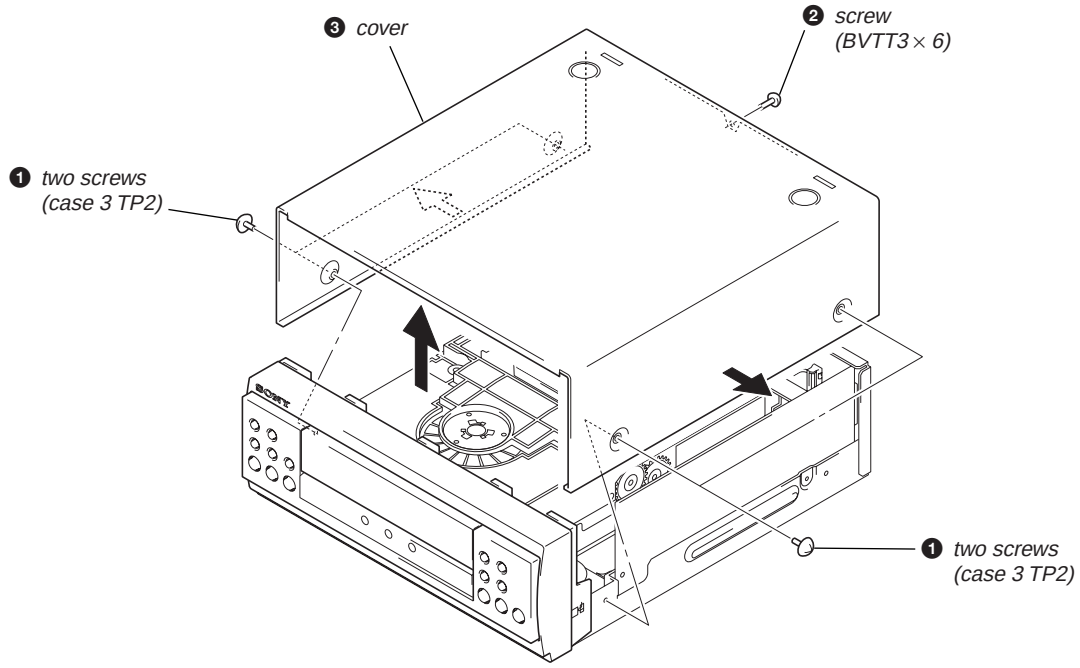
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

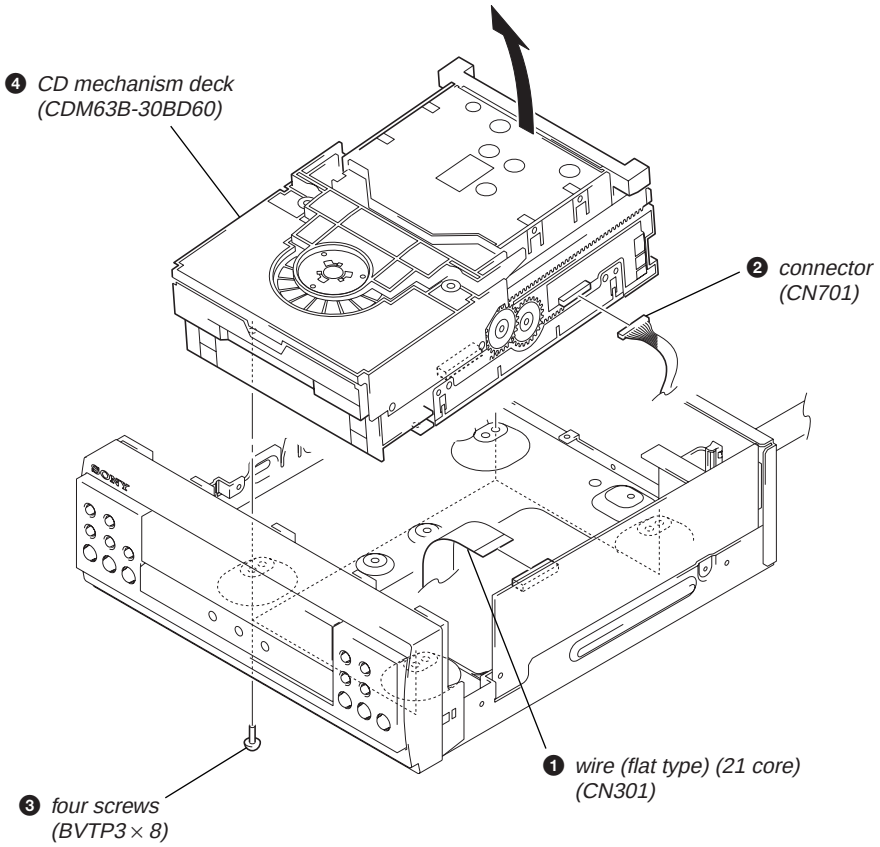


Note: Follow the disassembly procedure in the numerical order given.

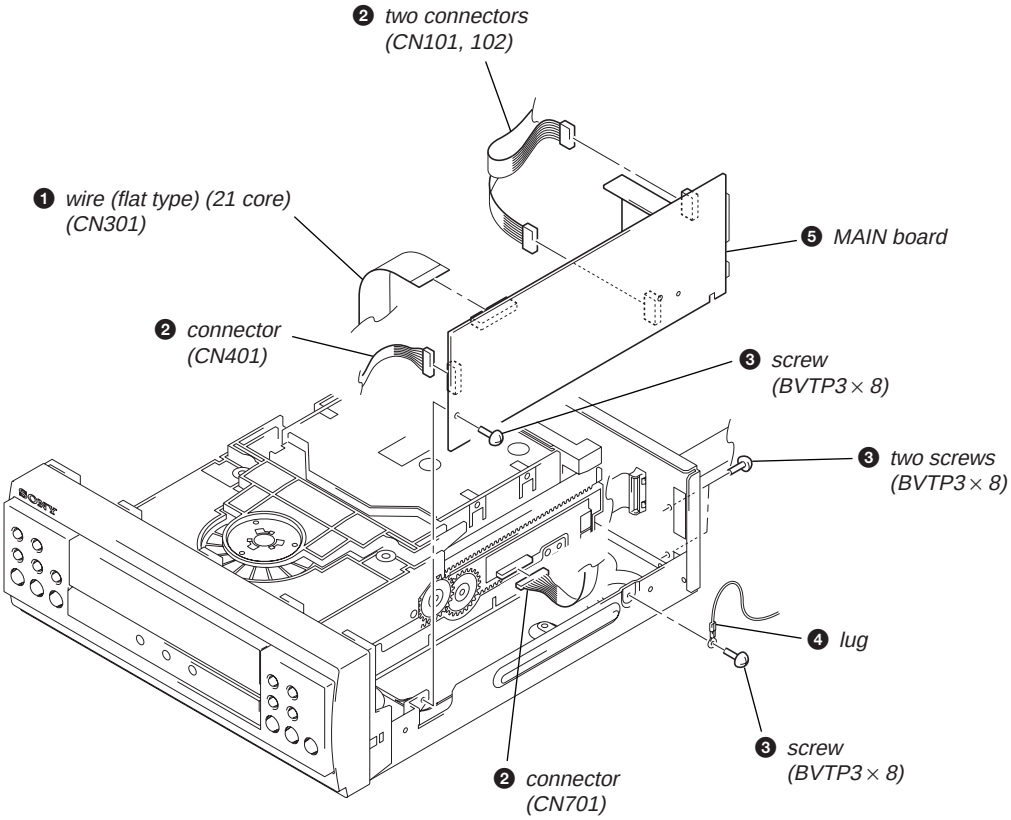
3-2. COVER



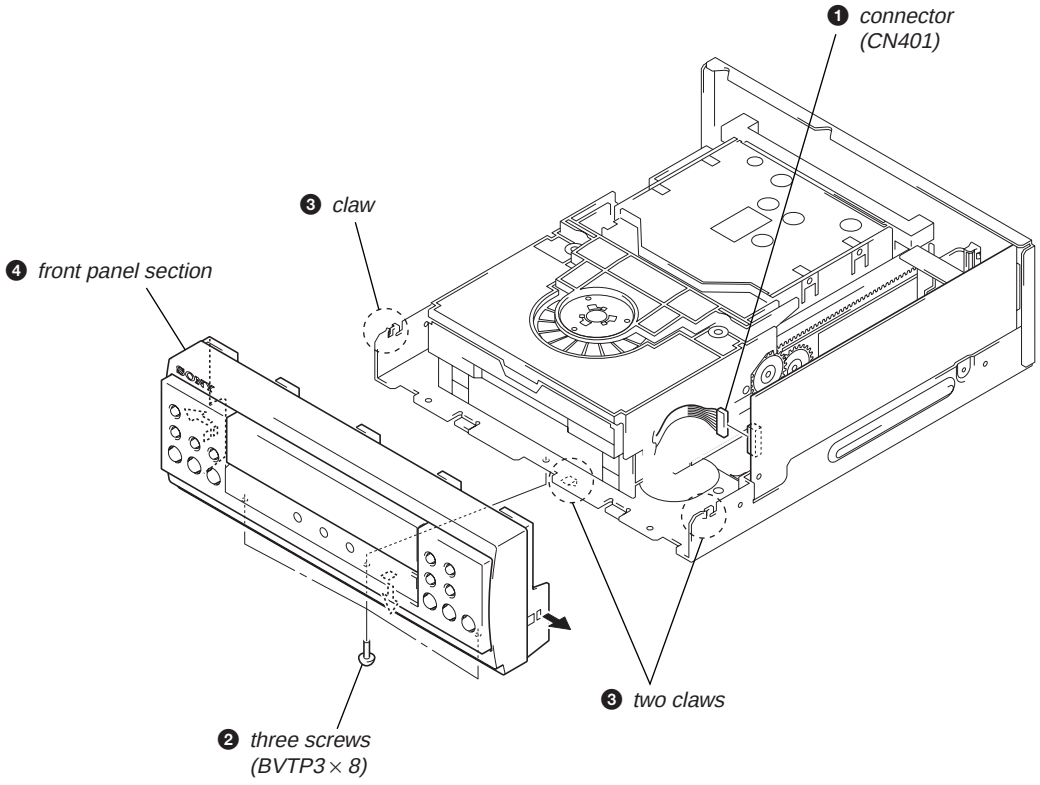
3-3. CD MECHANISM DECK (CDM63B-30BD60)



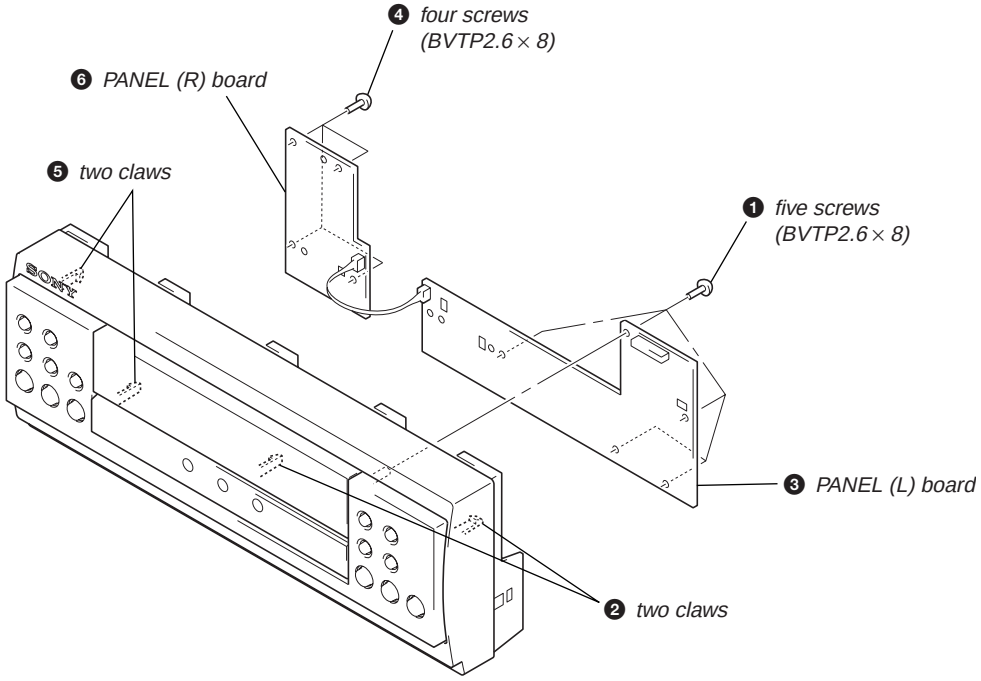
3-4. MAIN BOARD



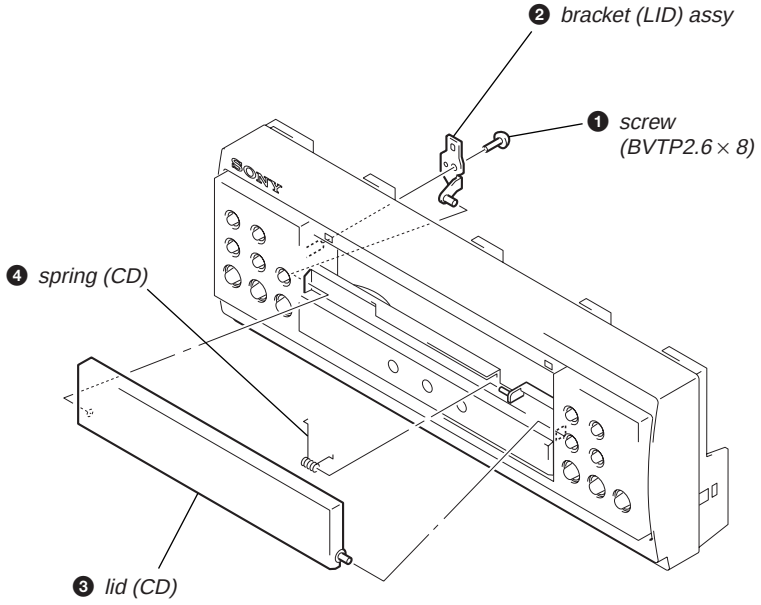
3-5. FRONT PANEL SECTION



3-6. PANEL (L) BOARD, PANEL (R) BOARD



3-7. LID (CD)



SECTION 4
TEST MODE

Note: Use flowing buttons in the test mode.
no mark : Button of CD unit (CDP-S3)
*1 : Button of amplifier unit (TA-S7AV or TA-S3)
*2 : Button of tuner unit (ST-S5 or ST-S3)

[CD Delivery Mode]

- This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. Turn the FILE SELECT *1 knob to set the CD function.
3. While pressing the EQ ON/OFF *1 button, press the I/⏻ *1 button.
4. The message "LOCK" is displayed on the fluorescent indicator tube of tuner unit and turn the power off automatically, and the CD delivery mode is set.

[GC Test Mode]
Enter the GC Test Mode

Procedure 1:

1. Press the I/⏻ *1 button to turn the power on.
2. While pressing the both PLAY MODE and ■ buttons, press the ⏏ (DISC 1) button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Procedure 2:

1. Press the I/⏻ *1 button to turn the power on.
2. While pressing the both STEREO/MONO *2 and CINEMA STUDIO C *1 buttons, press the CLOCK/TIMER *2 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Version Display Mode

Procedure:

1. Enter the GC test mode.
2. Each time the DISC 1 or TUNER MEMORY *2 button is pressed, microcomputer or mechanism deck version is displayed of each unit.
3. Press the DISC 3 or TUNING + *2 button to detail is displayed the version.

Key Check Mode

Procedure:

1. Enter the GC test mode.
2. Press the DISC 2 or TUNING – *2 button to set the key check mode, and displays "K 0 J 0 V 0" on the fluorescent indicator tube of tuner unit.
3. All buttons are pressed of CD unit, all LEDs are blinking of CD unit. (not change the display of fluorescent indicator tube)

Releasing the GC Test Mode

To release from this mode, press three buttons in the same manner as entering this mode or disconnect the power cord.

[CD Service Mode]

- This mode can run the CD sled motor optionally. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. Turn the FILE SELECT *1 knob to set the CD function.
3. While pressing the both PLAY MODE and ■ buttons, press the ⏮ button.
4. Set to the CD service mode.
5. With the CD in stop status, press the ⏩ button to move the optical pick-up to outside track, or press the ⏪ button to inside track.
6. To release from this mode, perform as follows.
   1) Move the optical pick-up to the most inside track.
   2) Disconnect the power cord.

Notes:
- Always move the optical pick-up to most inside track when releasing from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[CD Cancellation Mode of Repeat Limitation]

- This mode can cancel the CD repeat limitation (5 times).

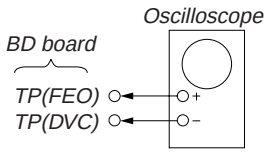
Procedure:

1. Press the I/⏻ *1 button to turn the power on.
2. Turn the FILE SELECT *1 knob to set the CD function.
3. While pressing the both PLAY MODE and ■ buttons, press the REPEAT button.
4. CD repeat limitation is canceled.
5. To release this mode, disconnect the power cord.

SECTION 5
ELECTRICAL ADJUSTMENTS

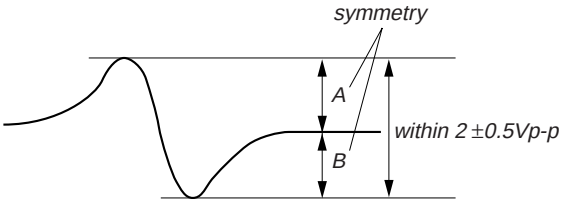
Note :
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use LUV-P01 (4-999-032-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :
1. Connect an oscilloscope to TP (FEO).
2. Connect between TP (FEI) and TP (DVC) (≒1.65 V) by lead wire.
3. Turn Power switch on.
4. Load a disc (LUV-P01) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
5. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2 ± 0.5 Vp-p.

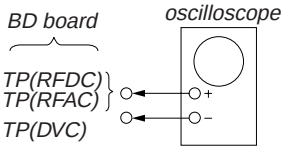
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

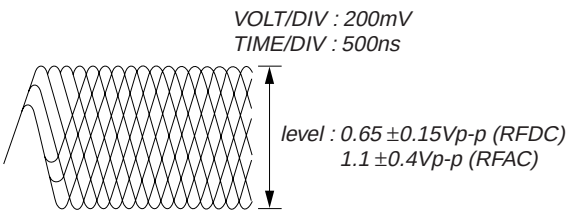
RF Level Check



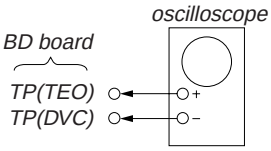
Procedure :
1. Connect an oscilloscope CH1 to TP (RFDC) and CH2 to TP (RFAC).
2. Turn Power switch on.
3. Load a disc (LUV-P01) and playback.
4. Confirm that oscilloscope waveform is clear and check if RF signal level is correct or not.

Note : Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

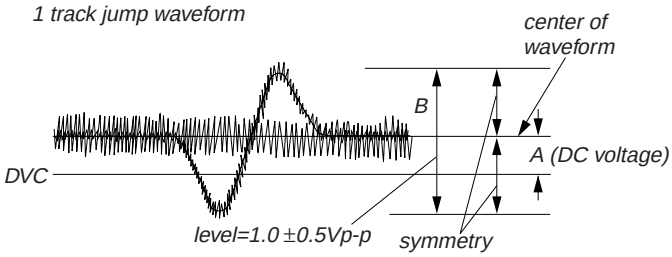
RF signal waveform



E-F Balance (1 Track jump) Check



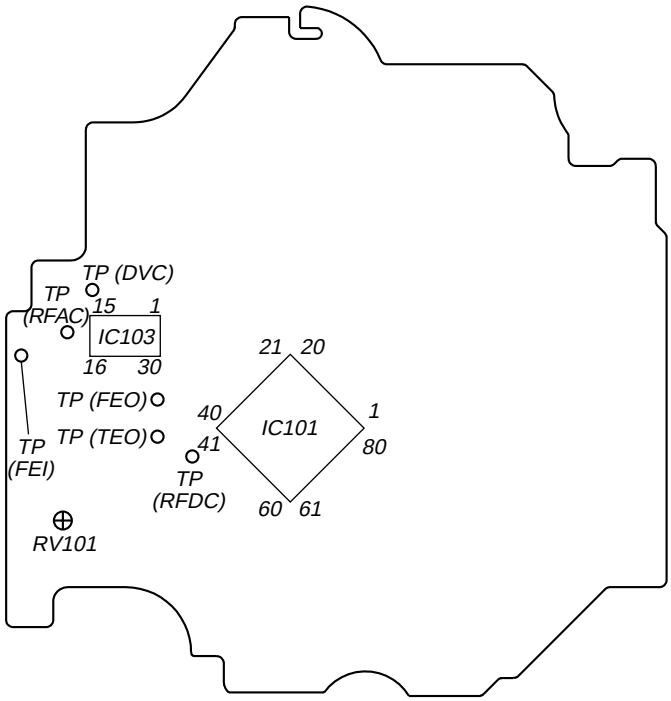
Procedure :
1. Connect an oscilloscope to TP (TEO) and TP (DVC).
2. Turn Power switch on.
3. Load a disc (LUV-P01) and playback the number nine track.
4. Press the ► button. (Becomes the 1 track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.



6. Adjust RV101 on the BD board so that the center of waveform becomes the same voltage of DVC. (i.e. A=0V)

Adjustment Location:

[BD BOARD] (Conductor Side)

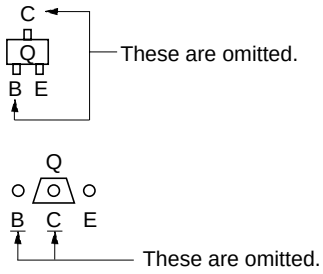


SECTION 6
DIAGRAMS

6-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS (In addition to this, the necessary note is printed in each block)

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.
- Indication of transistor.



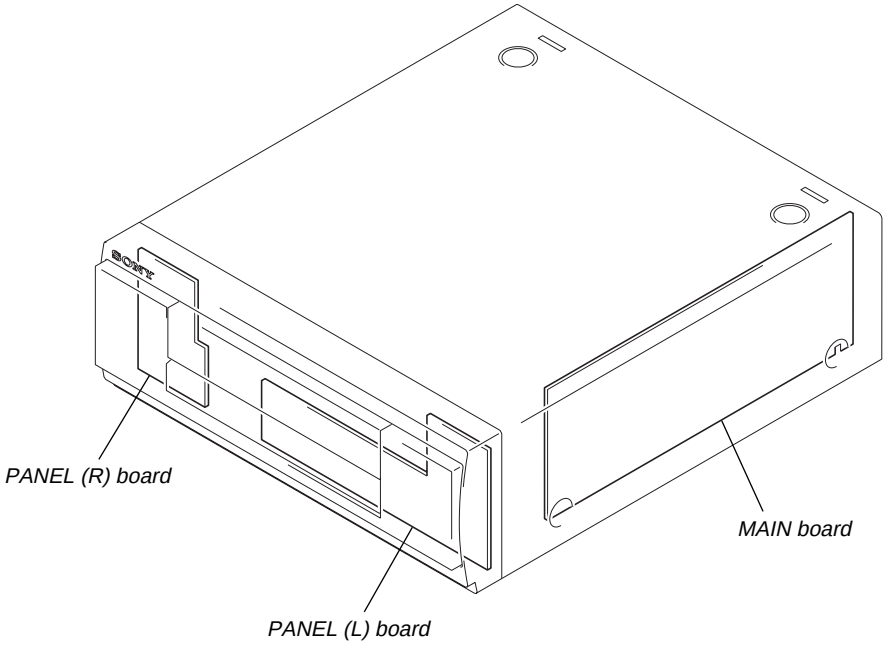
Note on Schematic Diagram:

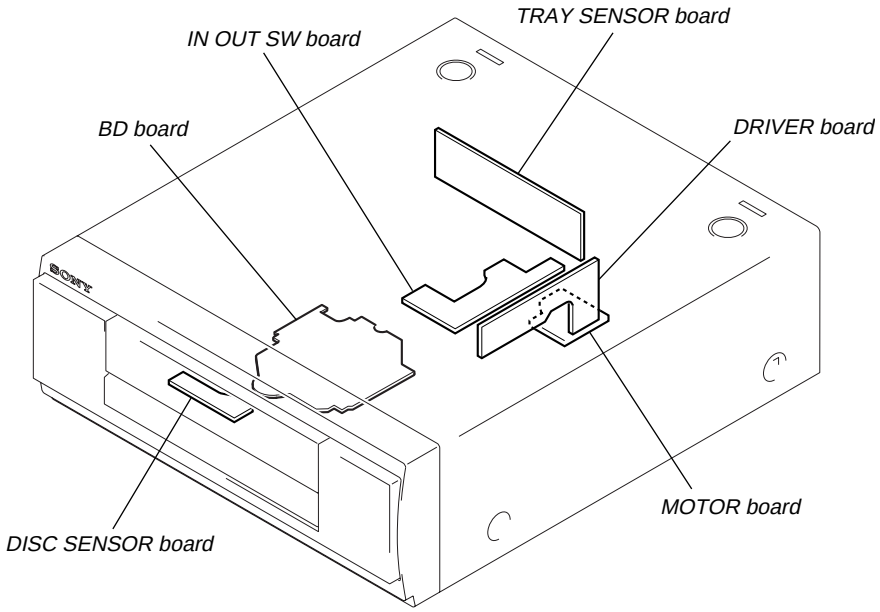
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

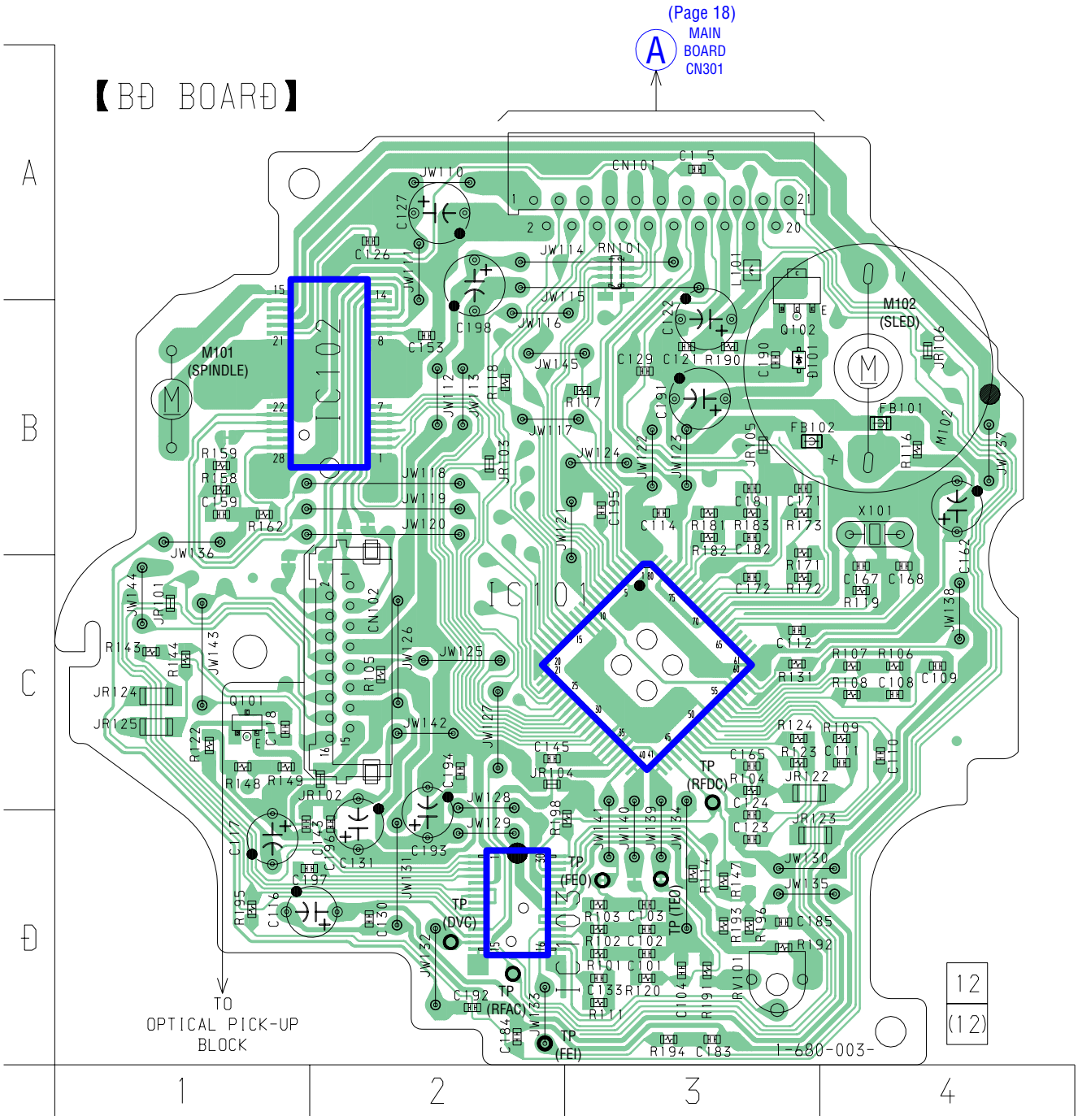
- ▬ : B+ Line.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY

- **Circuit Boards Location**





6-2. PRINTED WIRING BOARD – BD Section – • See page 13 for Circuit Boards Location.



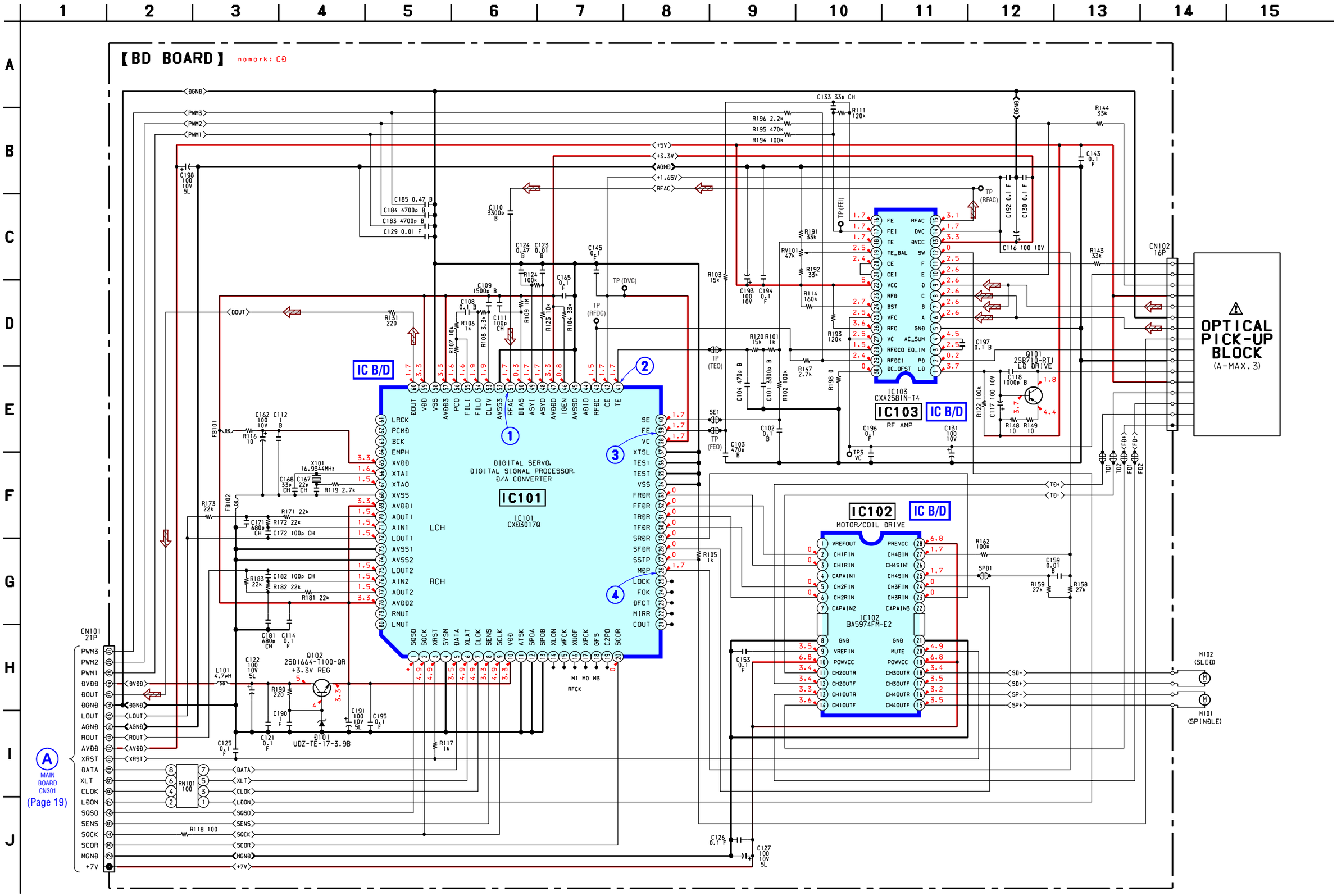
- **Semiconductor Location**

Ref. No.	Location
D101	B-3
IC101	C-3
IC102	B-2
IC103	D-2
Q101	C-1
Q102	A-3

There are a few cases that the part printed on this diagram isn't mounted in this model.

6-3. SCHEMATIC DIAGRAM – BD Section –

• See page 22 for Waveforms. • See page 22 for IC Block Diagrams.

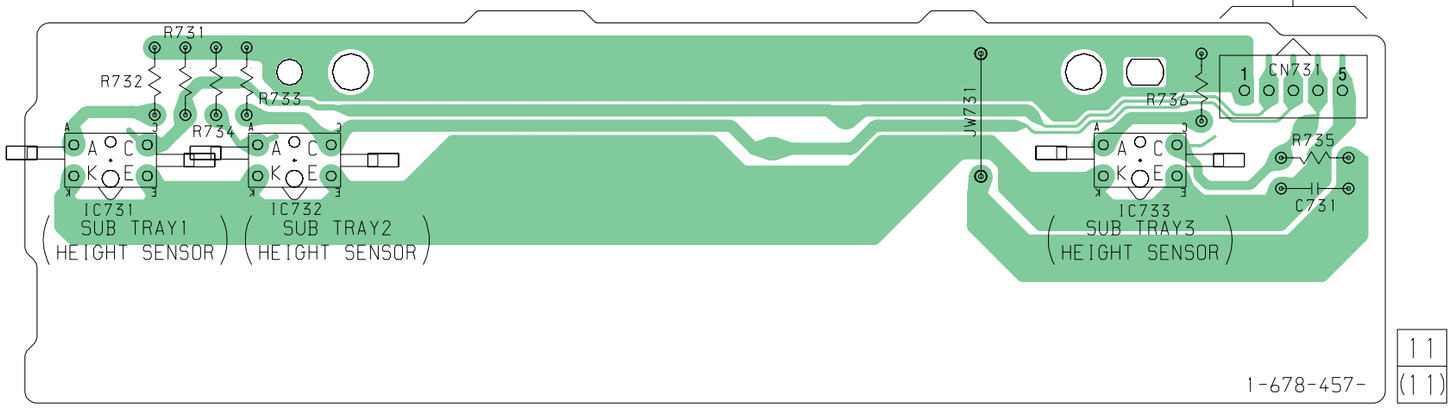


Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

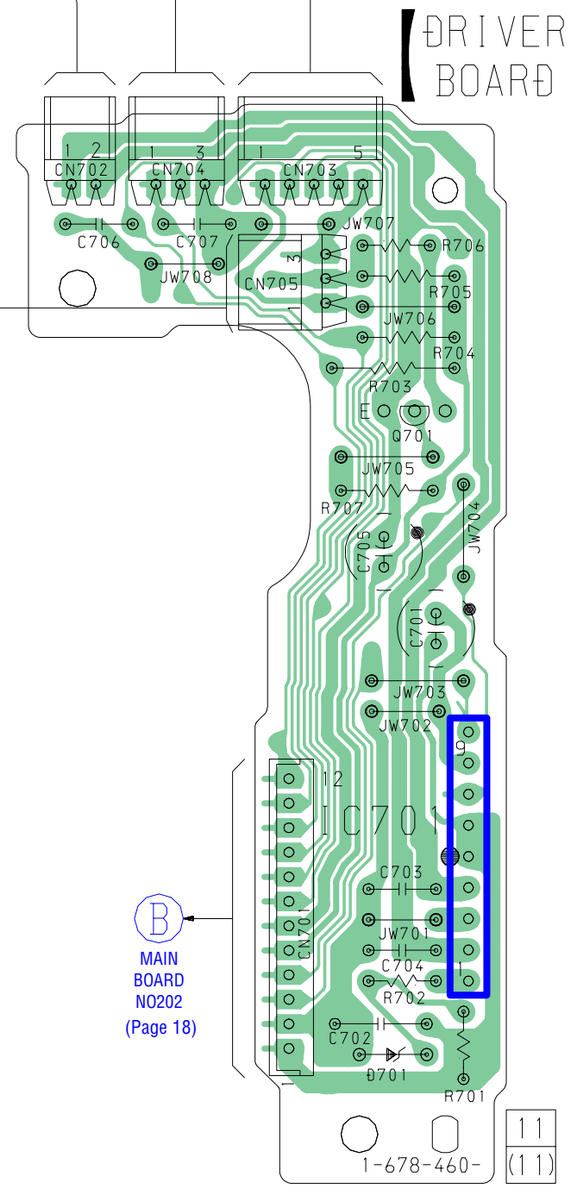
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD PLAY

6-4. PRINTED WIRING BOARDS – CD CHANGER Section – • See page 13 for Circuit Boards Location.

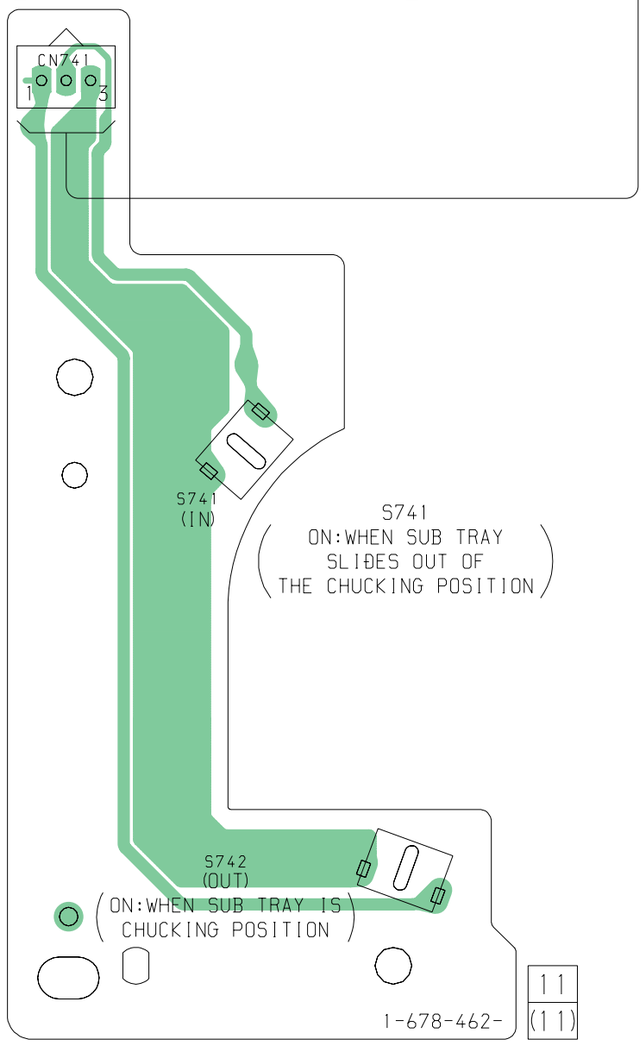
【TRAY SENSOR BOARD】



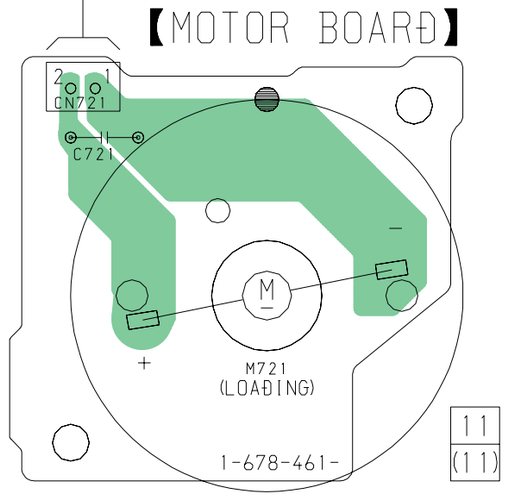
【DRIVER BOARD】



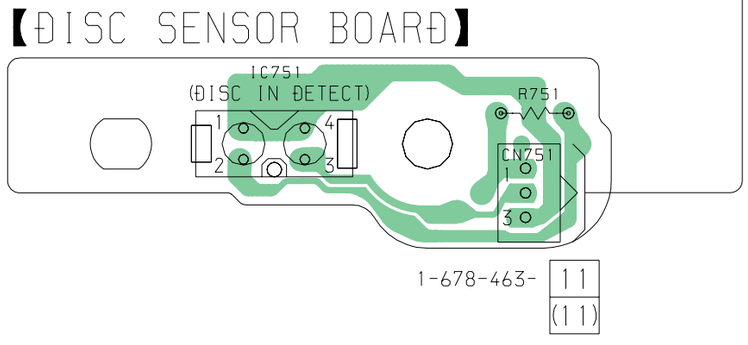
【IN OUT SW BOARD】



【MOTOR BOARD】



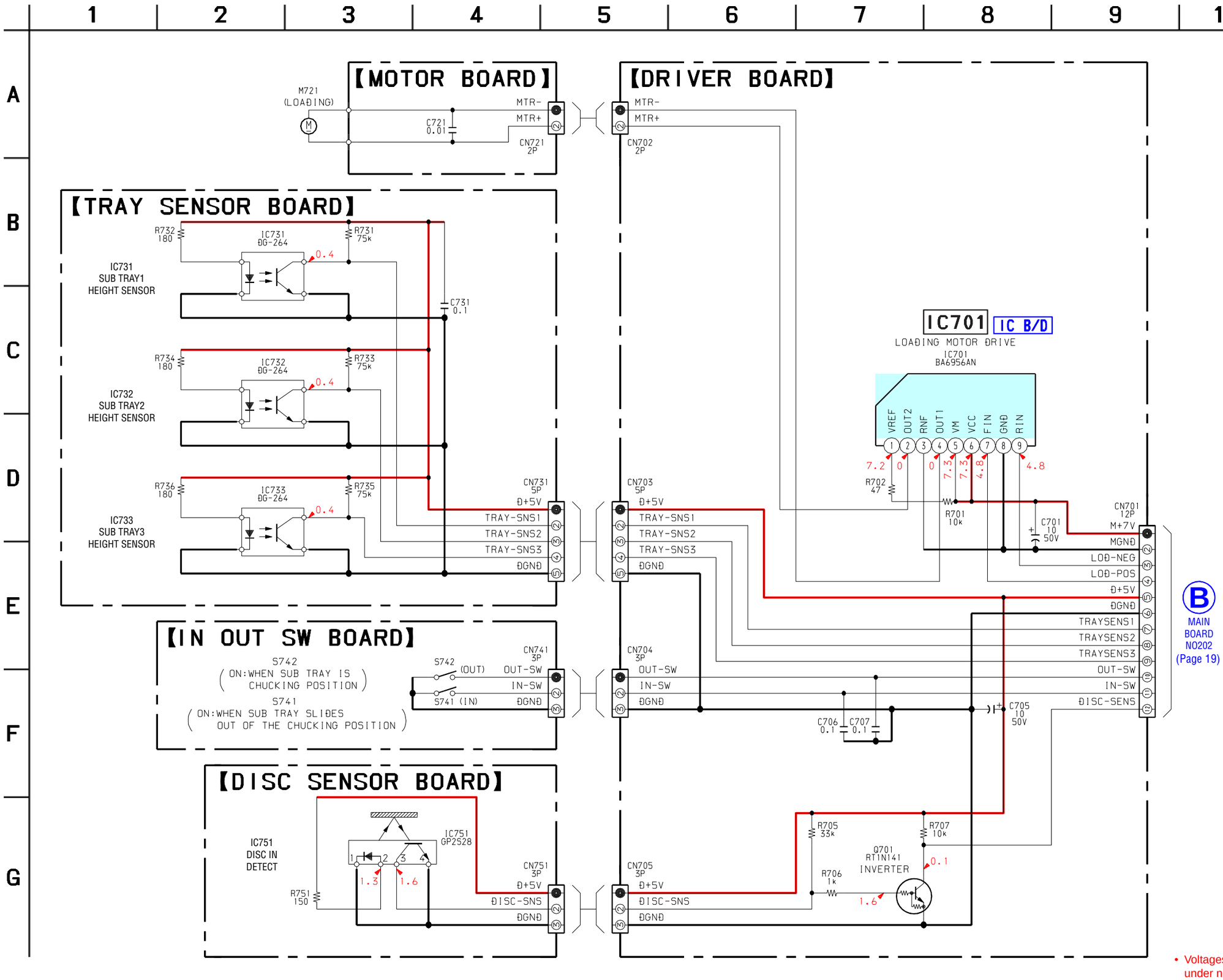
【DISC SENSOR BOARD】



B
MAIN
BOARD
NO202
(Page 18)

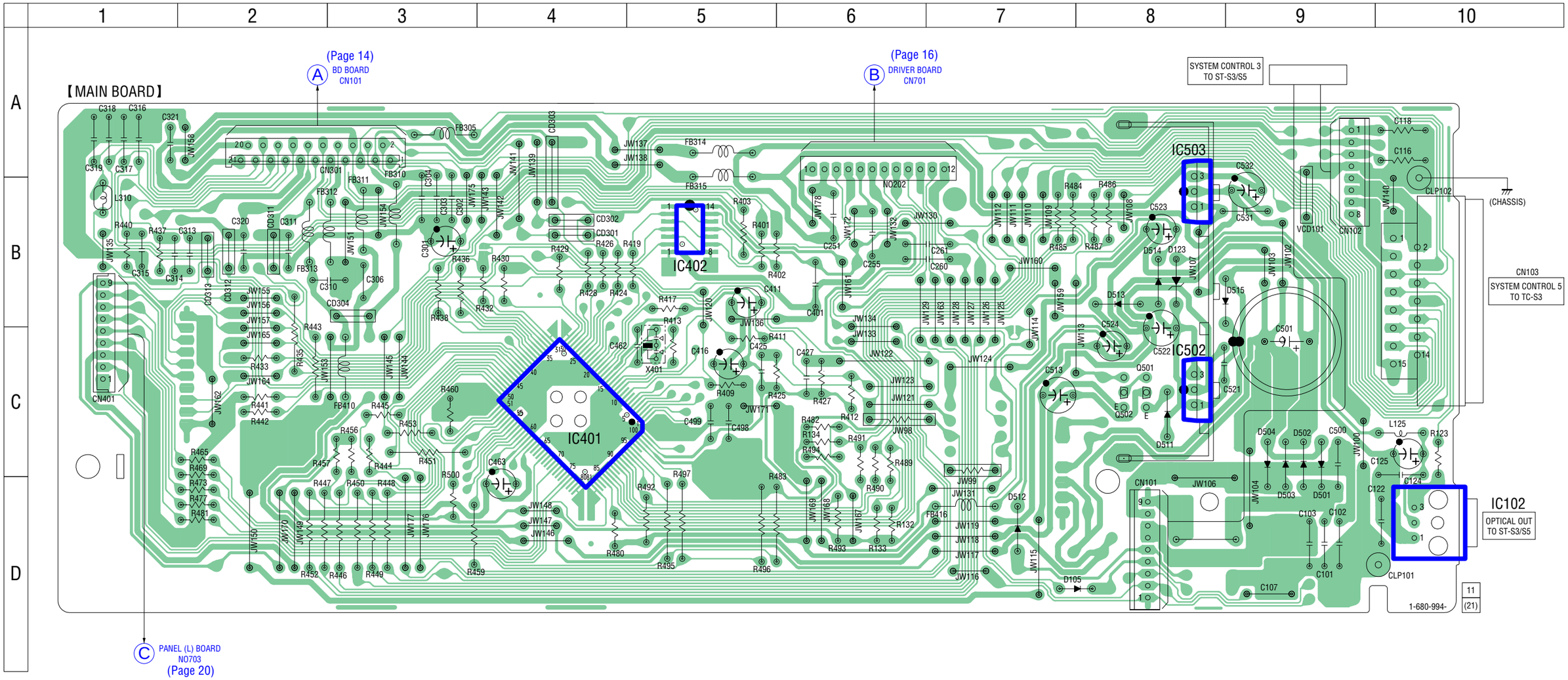
There are a few cases that the part isn't mounted in model is printed on diagrams.

6-5. SCHEMATIC DIAGRAM – CD CHANGER Section – • See page 22 for IC Block Diagram.



• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD STOP

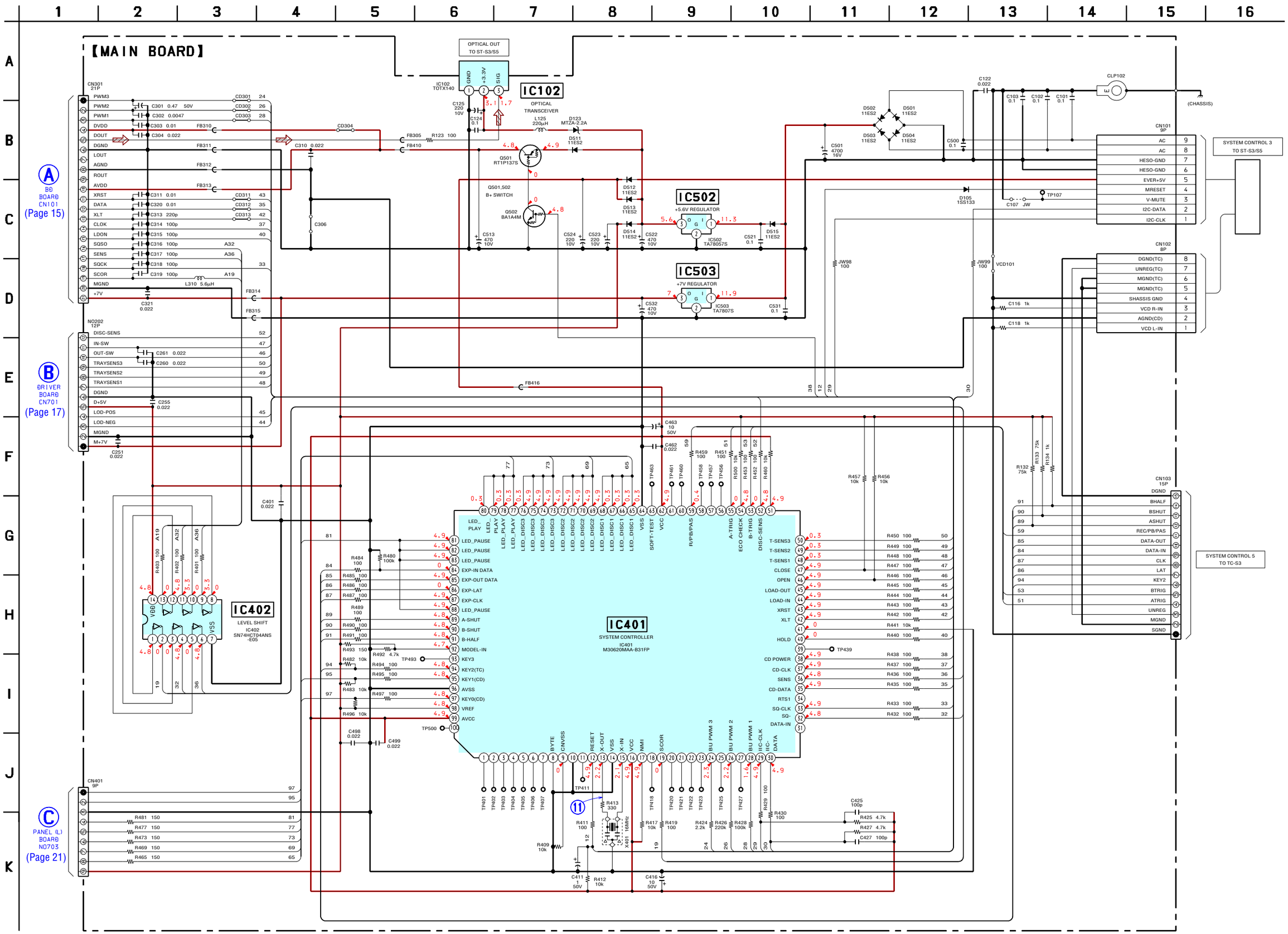
6-6. PRINTED WIRING BOARD – MAIN Section – • See page 13 for Circuit Boards Location.



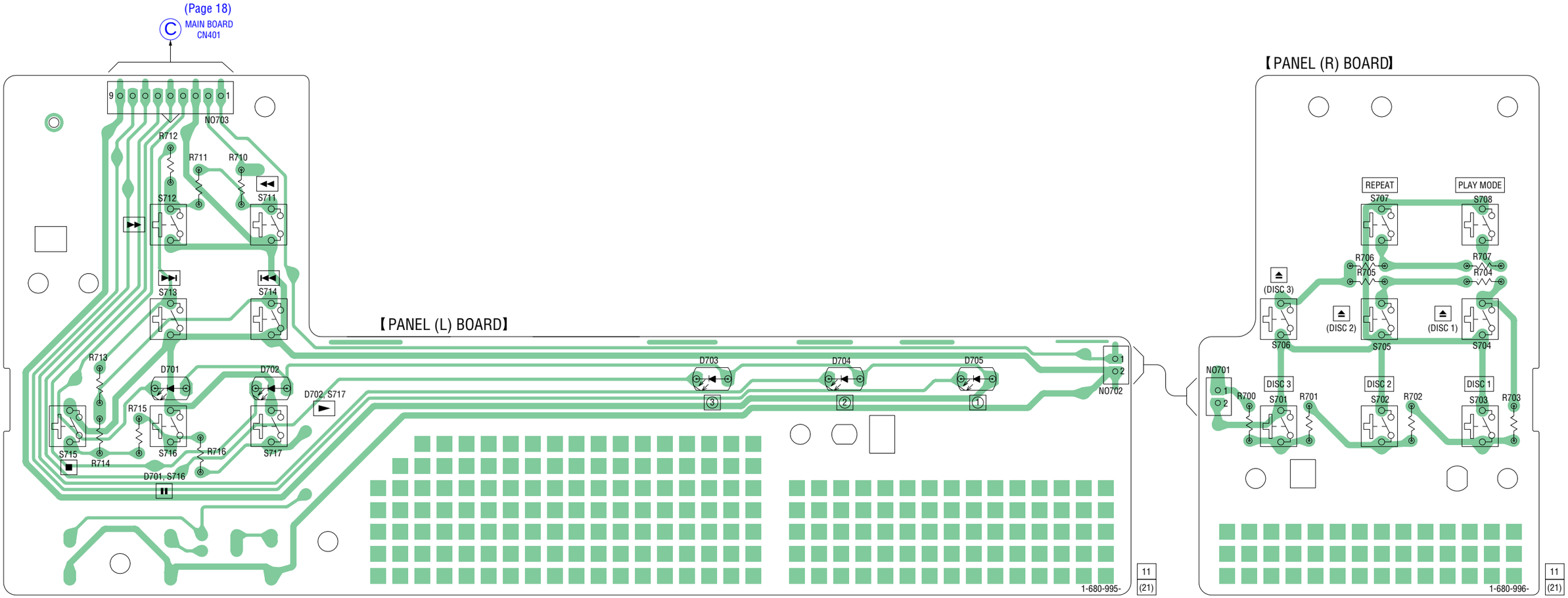
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D103	D-9	IC102	D-10
D104	D-9	IC401	C-4
D105	D-7	IC402	B-5
D123	B-8	IC502	C-8
D501	C-9	IC503	B-8
D502	C-9		
D503	C-9	Q501	C-8
D504	C-9	Q502	C-8
D511	C-8		
D512	D-7		
D513	B-8		
D514	B-8		

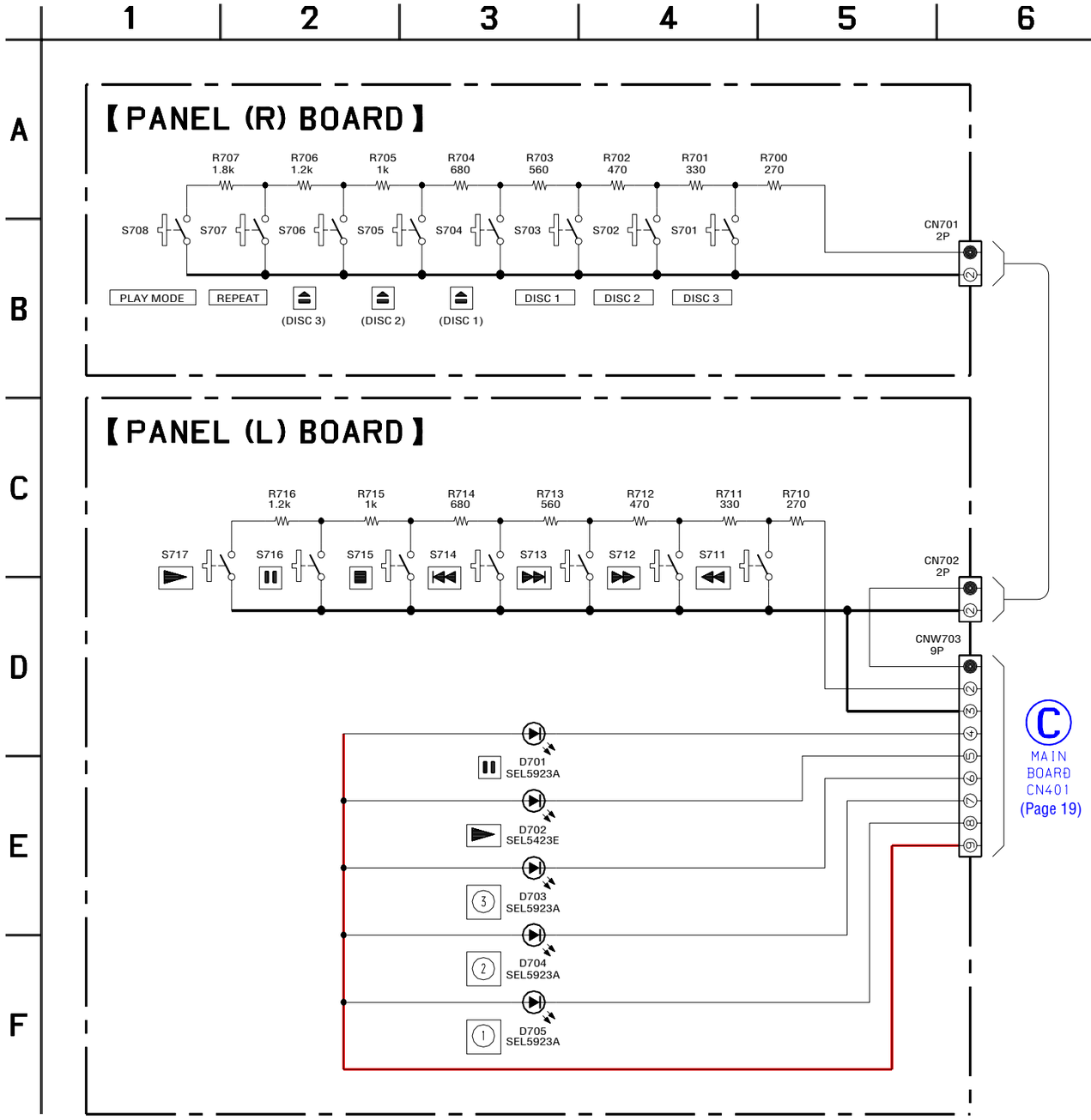
6-7. SCHEMATIC DIAGRAM – MAIN Section – • See page 22 for Waveform.



6-8. PRINTED WIRING BOARDS – PANEL Section – • See page 13 for Circuit Boards Location.



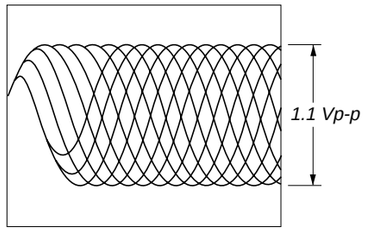
6-9. SCHEMATIC DIAGRAM – PANEL Section –



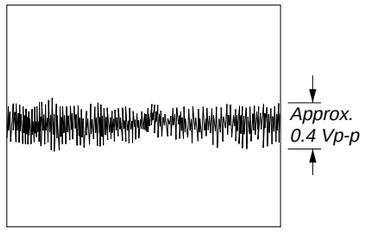
• **Waveforms**

– BD Board –

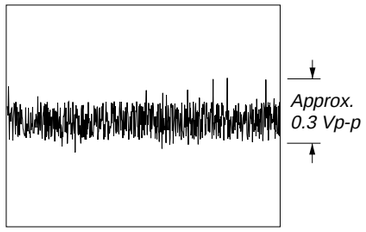
❶ IC101 ㊿㊶ (RFAC) (CD Play mode)



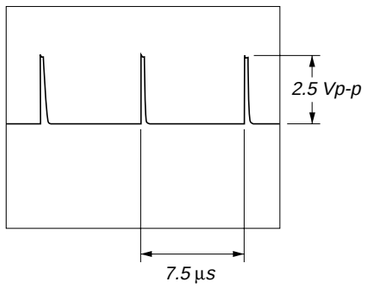
❷ IC101 ㊶ (TE) (CD Play mode)



❸ IC101 ㊴ (FE) (CD Play mode)

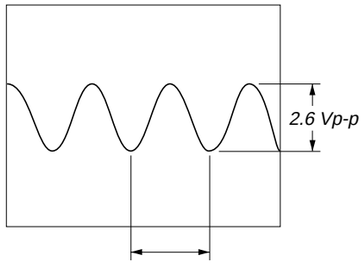


❹ IC101 ㉖ (MDP)



– MAIN Board –

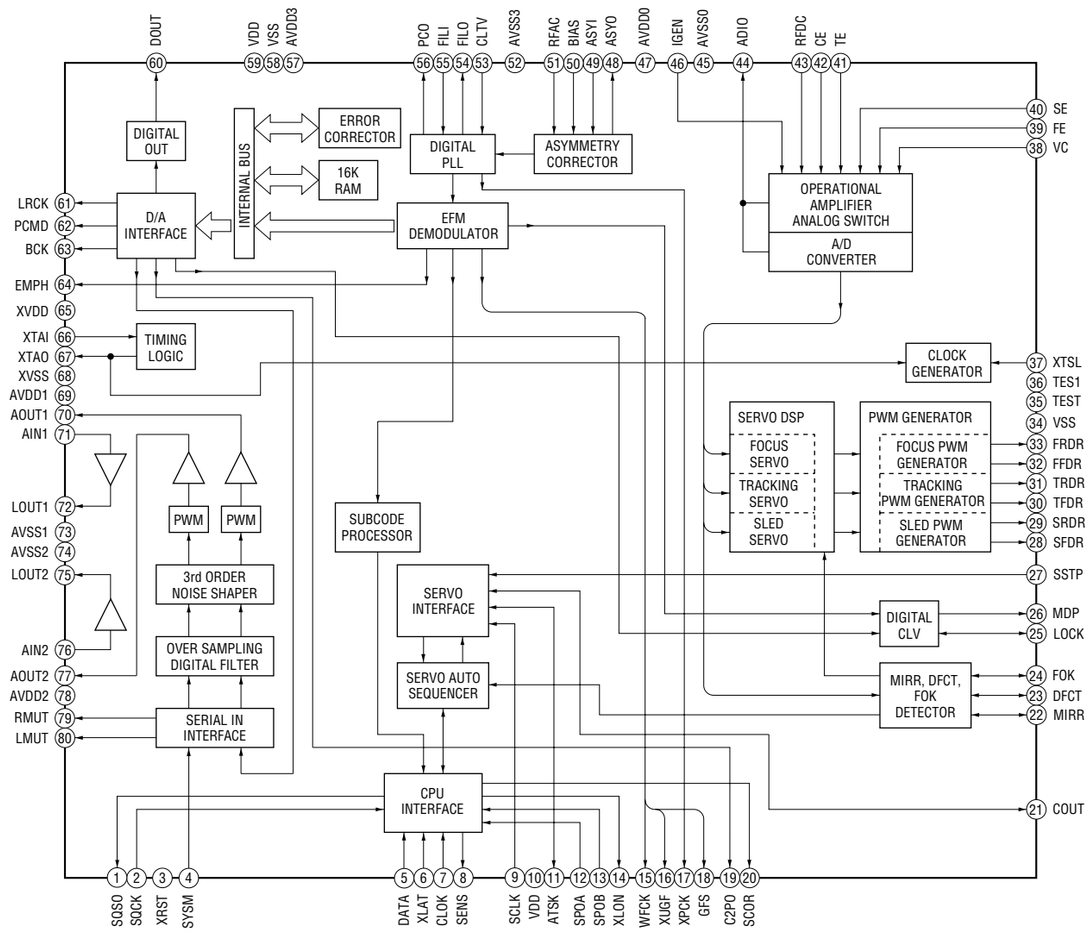
⓫ IC401 ⑬ (X-OUT)



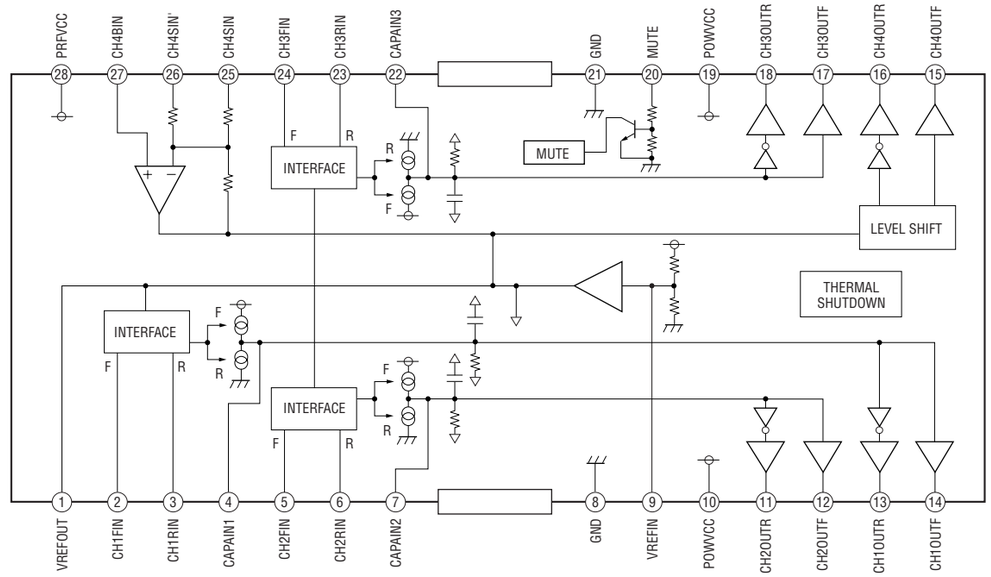
• **IC Block Diagrams**

– BD Board –

IC101 CXD3017Q

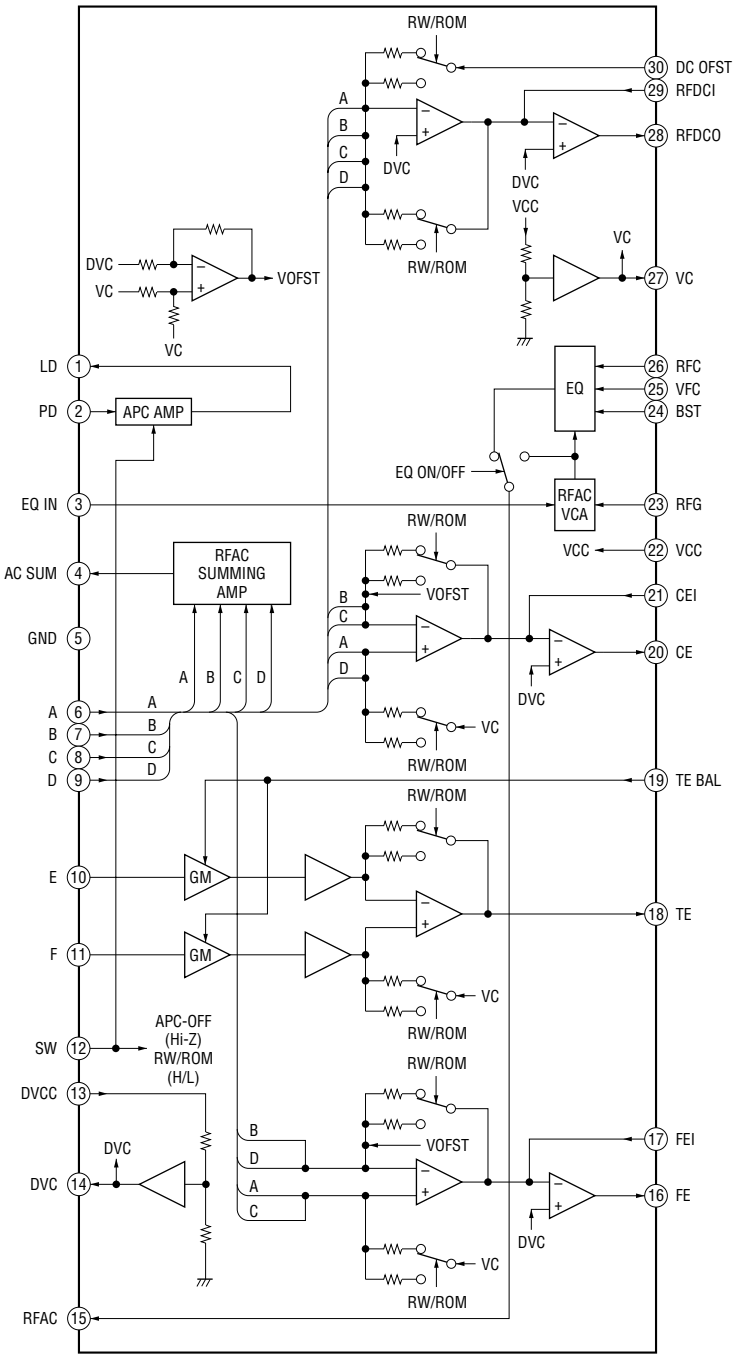


IC102 BA5974FM-E2

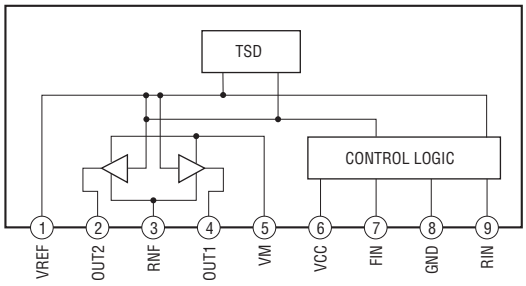


– DRIVER Board –

IC103 CXA2581N-T4



IC701 BA6956AN



6-10. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC401 M30620MAA-B31FP (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 7	—	—	Not used (open)
8	BYTE	I	External data bus line byte selection signal input "L": 16 bits, "H": 8 bits Not used (fixed at "L")
9	CNVSS	—	To flash memory connector
10	—	—	Not used (fixed at "L")
11	—	—	Not used (open)
12	RESET	I	Reset signal input from the tuner unit (ST-S3/S5)
13	X-OUT	O	System clock output terminal (16 MHz)
14	VSS	—	Ground terminal
15	X-IN	I	System clock input terminal (16 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal (fixed at "H" in this set)
18	—	—	Not used (open)
19	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD3017Q (IC101)
20 to 23	—	—	Not used (open)
24	BU PWM 3	O	RFDC PWM signal output to the CXA2581N (IC103)
25	—	—	Not used (open)
26	BU PWM 2	O	Tracking error PWM signal output to the CXA2581N (IC103)
27	—	—	Not used (open)
28	BU PWM 1	O	Focus error PWM signal output to the CXA2581N (IC103)
29	IIC-CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the tuner unit (ST-S3/S5)
30	IIC-DATA	I/O	Communication data bus with the tuner system (ST-S3/S5)
31	—	—	Not used
32	SQ-DATA-IN	I	Subcode Q data input from the CXD3017Q (IC101)
33	SQ-CLK	O	Subcode Q data reading clock signal output to the CXD3017Q (IC101)
34	RTS1	—	Not used
35	CD-DATA	O	CD decode data output to the CXD3017Q (IC101)
36	SENS	I	Internal status (SENSE) signal input from the CXD3017Q (IC101)
37	CD-CLK	O	Serial data transfer clock signal output to the CXD3017Q (IC101)
38	CD POWER	O	Power on/off control signal output for the CD mechanism deck section "L": standby, "H": power on
39	—	—	Not used (open)
40	HOLD	O	Automatic power control hold signal output to the CXA2581N (IC103)
41	—	—	Not used (fixed at "L")
42	XLT	O	Serial data latch pulse output to the CXD3017Q (IC101)
43	XRST	O	Reset signal output to the CXD3017Q (IC101)
44	LOAD-IN	O	Loading motor drive signal (load-in direction) output the motor driver (IC701)
45	LOAD-OUT	O	Loading motor drive signal (load-out direction) output the motor driver (IC701)
46	OPEN	I	Sub tray load in/out detect switch (S742) input "L": sub tray is chucking position
47	CLOSE	I	Sub tray load in/out detect switch (S742) input "L": sub tray slides out of chucking position
48	T-SENS1	I	Detection input from the disc tray 1 height sensor (IC731) "H": disc tray 1 position is chucking position
49	T-SENS2	I	Detection input from the disc tray 2 height sensor (IC732) "H": disc tray 2 position is chucking position

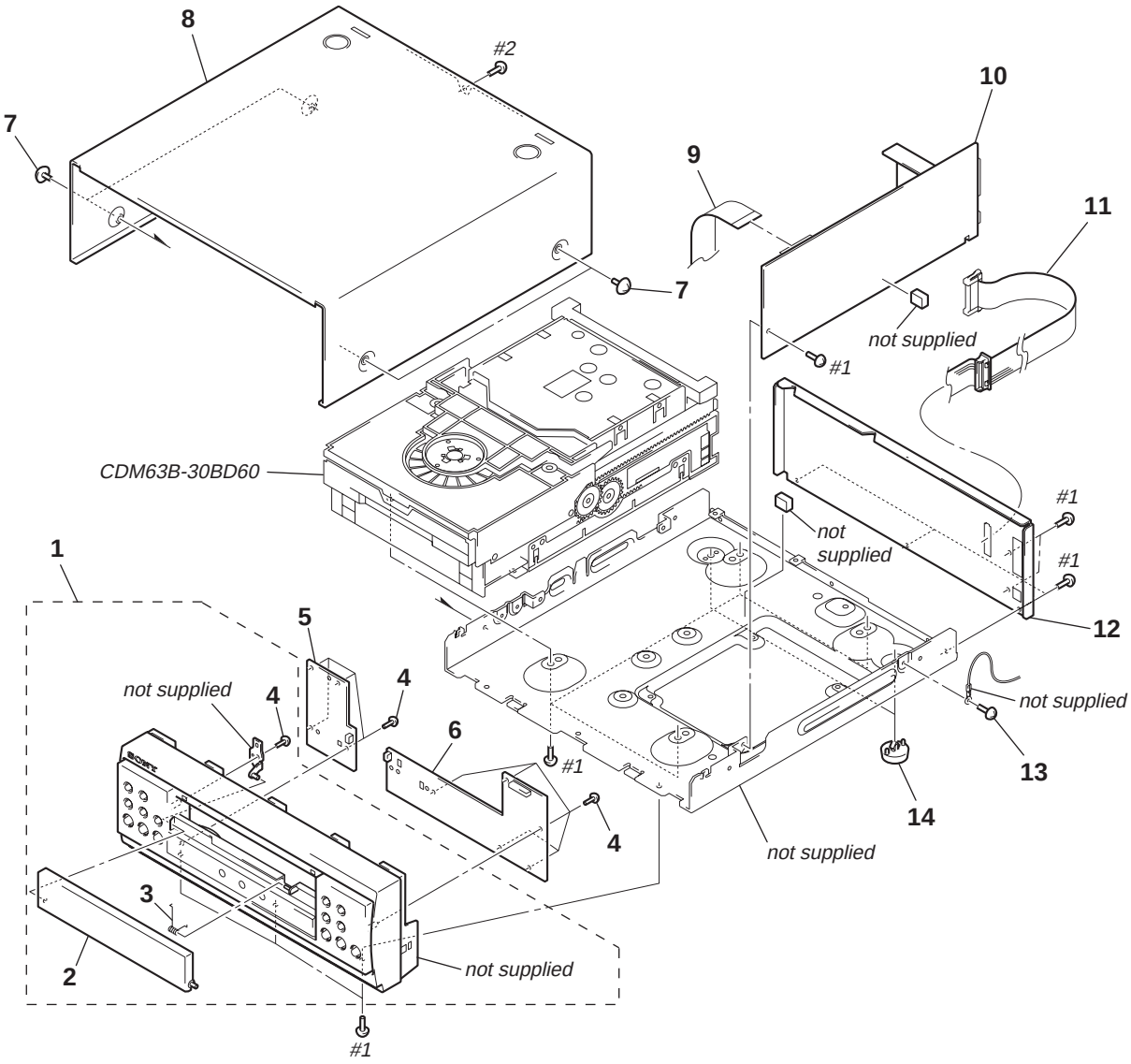
Pin No.	Pin Name	I/O	Description
50	T-SENS3	I	Detection input from the disc tray 3 height sensor (IC733) “H”: disc tray 3 position is chucking position
51	—	—	Not used (fixed at “H”)
52	DISC-SENS	I	Detection input from the disc in detect sensor (IC751)
53	B-TRIG	O	Deck-B trigger plunger drive signal output to the tape deck unit (TC-S3) “H”: trigger plunger on
54	ECO CHECK	—	Not used (fixed at “H”)
55	A-TRIG	O	Deck-A trigger plunger drive signal output to the tape deck unit (TC-S3) “H”: trigger plunger on
56 to 58	—	—	Not used (open)
59	R/PB/PASS	O	Recording/playback/pass selection signal output to the tape deck unit (TC-S3) “L”: recording, center voltage: playback, “H”: pass
60, 61	—	—	Not used (open)
62	VCC	—	Power supply terminal (+5V)
63	SOFT-TEST	O	For software check terminal
64	VSS	—	Ground terminal
65 to 68	LED_DISC1	O	LED drive signal output of the ① indicator (D705) “L”: LED on
69 to 72	LED_DISC2	O	LED drive signal output of the ② indicator (D704) “L”: LED on
73 to 76	LED_DISC3	O	LED drive signal output of the ③ indicator (D703) “L”: LED on
77 to 80	LED_PLAY	O	LED drive signal output of the ► indicator (D702) “L”: LED on
81 to 83	LED_PAUSE	O	LED drive signal output of the ❚❚ indicator (D701) “L”: LED on
84	EXP-IN DATA	I	Serial data input from the tape deck unit (TC-S3)
85	EXP-OUT DATA	O	Serial data output to the tape deck unit (TC-S3)
86	EXP-LAT	O	Serial data latch pulse signal output to the tape deck unit (TC-S3)
87	EXP-CLK	O	Serial data transfer clock signal output to the tape deck unit (TC-S3)
88	LED_PAUSE	O	LED drive signal output of the ❚❚ indicator (D701) “L”: LED on
89	A-SHUT	I	Shut off (desk-A) detection signal input from the tape deck unit (TC-S3)
90	B-SHUT	I	Shut off (desk-B) detection signal input from the tape deck unit (TC-S3)
91	B-HALF	I	Detection input from the deck-B cassette detect switch of the tape deck unit (TC-S3) “L”: cassette in
92	MODEL-IN	I	Model destination setting terminal
93	KEY3	—	Not used (open)
94	KEY2 (TC)	I	Key input from the tape deck unit (TC-S3) (A/D input)
95	KEY1 (CD)	I	Key input terminal (A/D input) (S711 to S717) ◄◄, ►► , ⏮, ⏭, ■, ❚❚, ► keys input
96	AVSS	—	Ground terminal (for A/D conversion)
97	KEY1 (CD)	I	Key input terminal (A/D input) (S701 to S708) DISC 3, DISC 2, DISC 1, ⏏ (DISC1), ⏏ (DISC2), ⏏ (DISC3), REPEAT, PLAY MODE keys input
98	VREF	I	Reference voltage (+5V) input terminal (for A/D converter)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	—	—	Not used (open)

SECTION 7
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

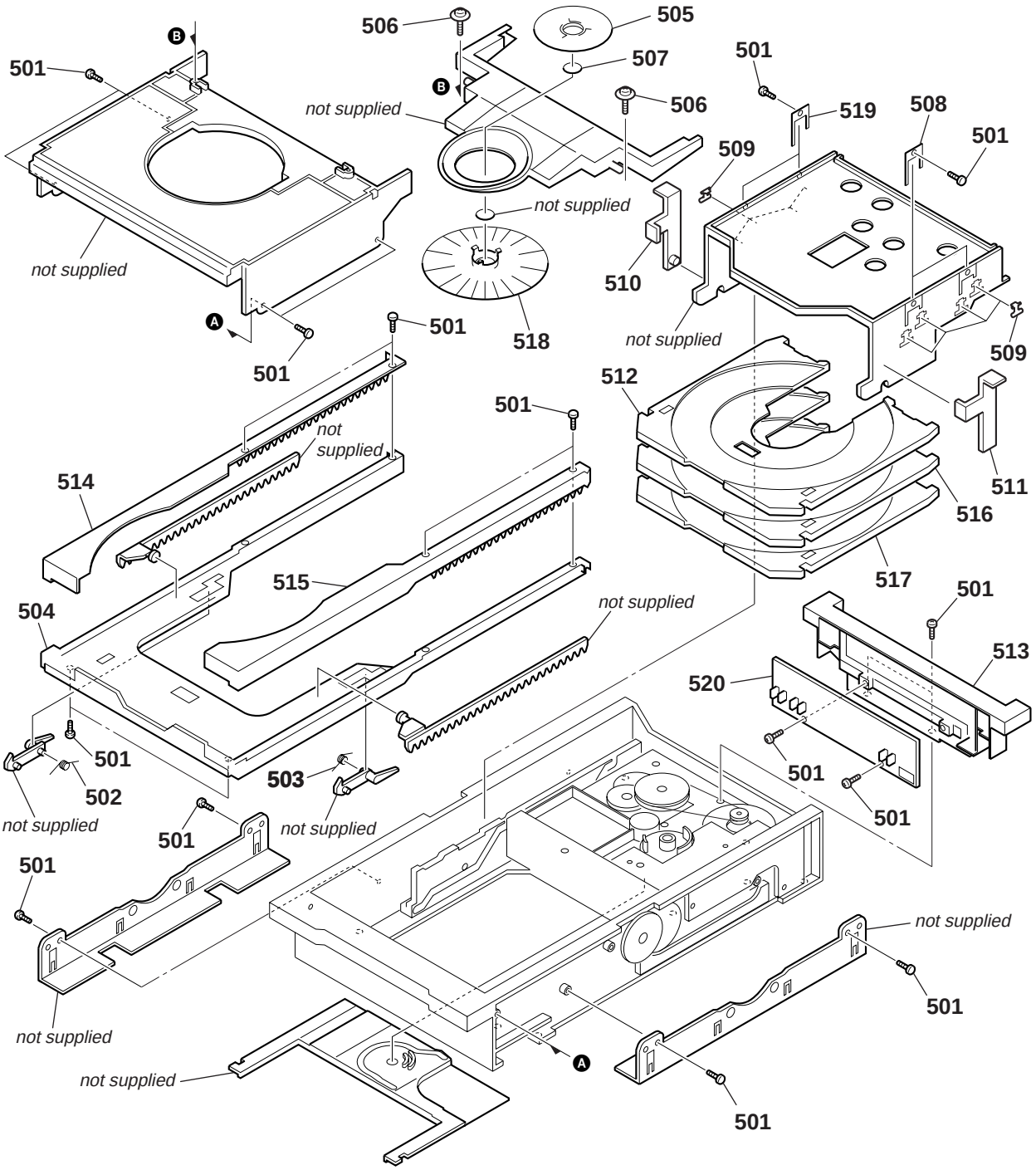
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. GENERAL SECTION



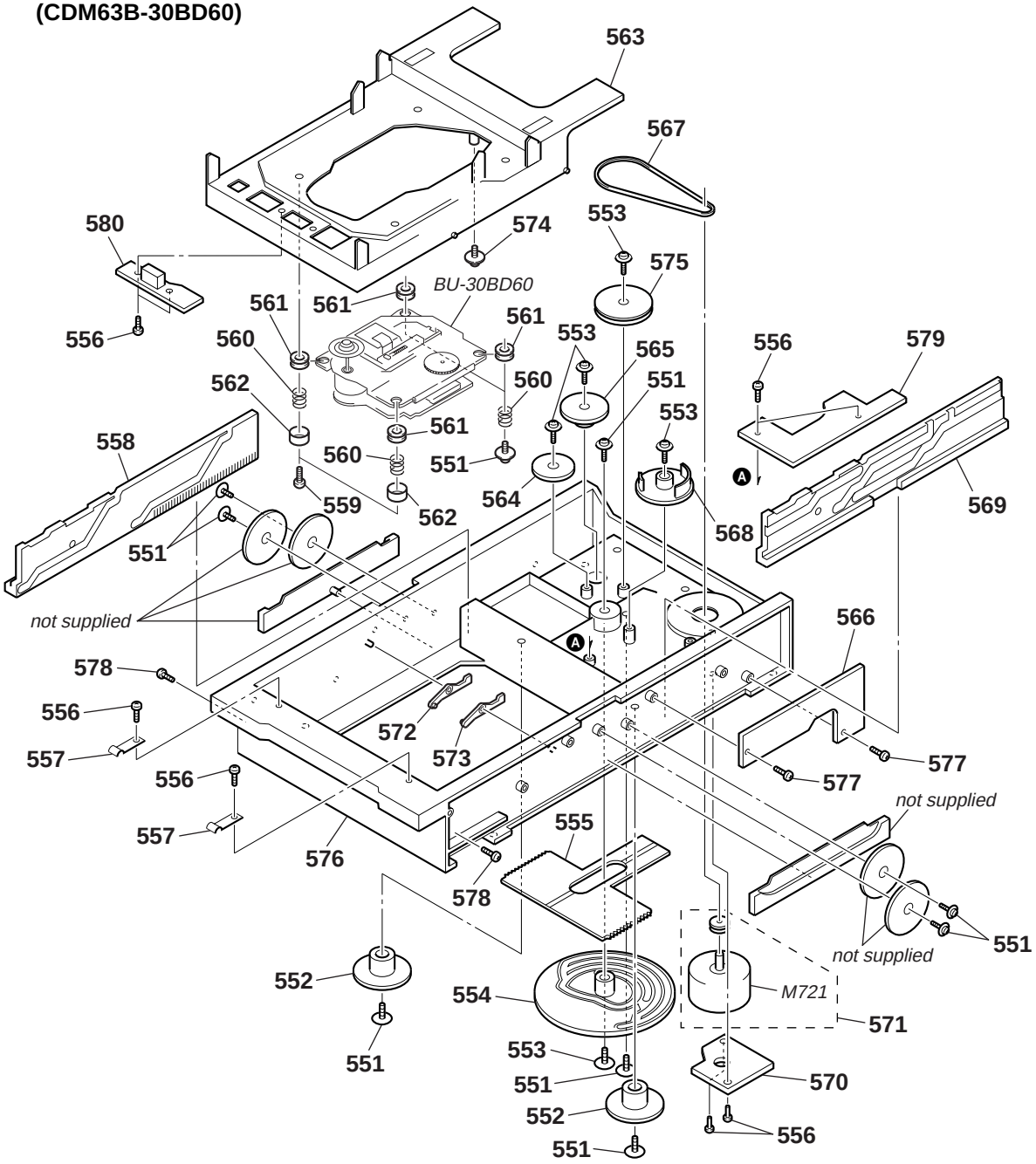
Ref. No.	Part No.	Description	Remark
1	X-4953-613-1	PANEL ASSY, FRONT	
2	4-233-136-01	LID (CD)	
3	4-233-147-01	SPRING (CD)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	
5	1-680-996-11	PANEL (R) BOARD	
6	1-680-995-11	PANEL (L) BOARD	
7	3-363-099-21	SCREW (CASE 3 TP2)	
8	4-233-134-11	COVER	
9	1-823-055-11	WIRE (FLAT TYPE) (21 CORE)	
10	A-4725-658-A	MAIN BOARD, COMPLETE	
11	1-757-633-11	CORD (WITH CONNECTOR) 17P	
12	4-233-135-01	PANEL, BACK (AEP, UK)	
12	4-233-135-11	PANEL, BACK (Korea, Australian)	
12	4-233-135-31	PANEL, BACK (Mexican)	
13	3-970-608-01	SUMITITE (B3), +BV	
14	4-965-822-01	FOOT	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

7-2. CD MECHANISM DECK SECTION-1 (CDM63B-30BD60)



Ref. No.	Part No.	Description	Remark
501	4-218-253-01	SCREW (M2.6), +BTTP	
502	4-228-996-01	SPRING (R), TORSION	
503	4-228-995-01	SPRING (L), TORSION	
504	4-228-972-02	TRAY (MAIN)	
505	4-231-971-01	PULLEY (30B), CHUCKING	
506	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
507	4-228-414-01	BRACKET (YOKE)	
508	4-228-980-01	SPRING (STOCKER), LEAF	
509	4-228-981-02	STOPPER (TRAY)	
510	4-228-963-01	SLIDER (STOCKER. L)	
511	4-228-964-01	SLIDER (STOCKER. R)	
512	4-228-970-02	TRAY (SUB)	
513	4-229-001-01	HOLDER (SENSOR)	
514	4-228-975-02	COVER (TRAY. L)	
515	4-228-978-02	COVER (TRAY. R)	
516	4-228-970-12	TRAY (SUB)	
517	4-228-970-22	TRAY (SUB)	
518	X-4953-307-1	PULLEY (A) ASSY, CHUCKING	
519	4-234-423-01	SPRING (STOCKER L), LEAF	
520	1-678-457-11	TRAY SENSOR BOARD	

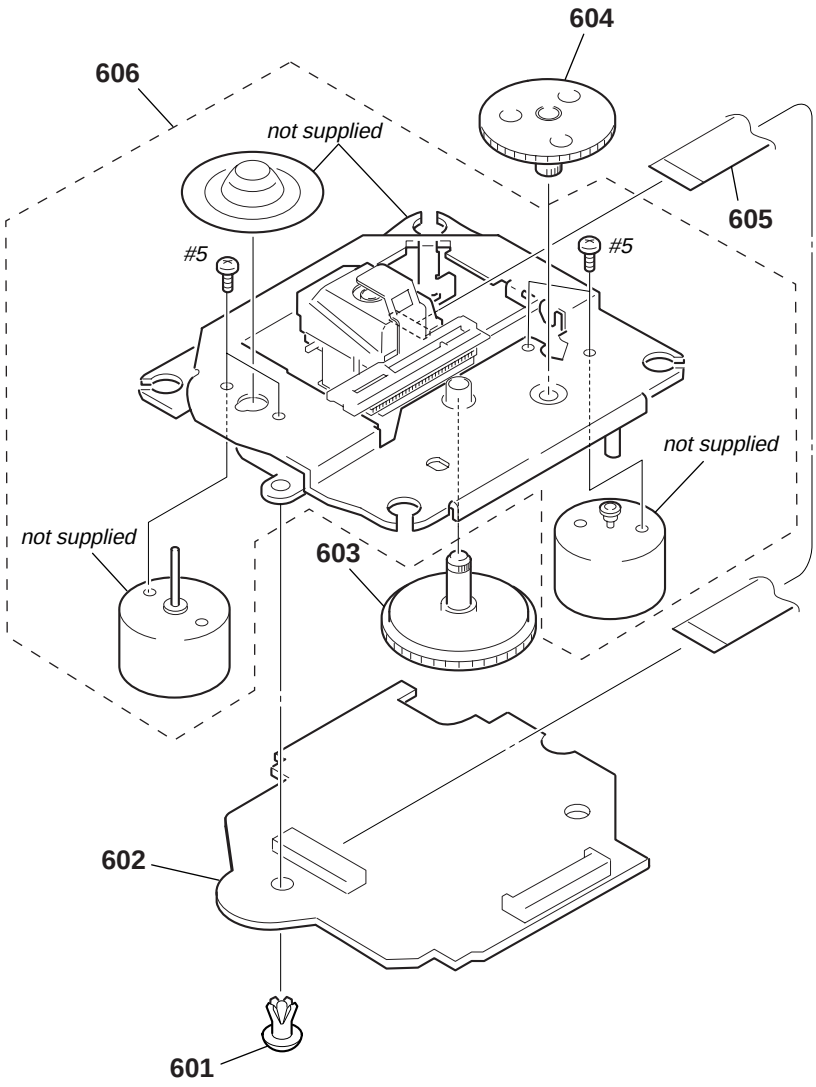
7-3. CD MECHANISM DECK SECTION-2 (CDM63B-30BD60)



Ref. No.	Part No.	Description	Remark
551	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
552	4-229-002-02	GEAR (SLIDER)	
553	4-218-254-21	SCREW (M2.6), +PTPWH	
554	4-228-971-01	CAM	
555	4-228-974-02	RACK (CENTER)	
556	4-218-253-01	SCREW (M2.6), +BTTP	
557	4-228-969-02	SPRING (TABLE), LEAF	
558	4-228-977-01	SLIDER (BU. L)	
559	4-951-620-01	SCREW (2.6X8), +BVTP	
560	4-227-045-11	SPRING (INSULATOR), COIL	
561	4-231-451-01	INSULATOR (BU-30)	
562	4-231-151-01	STOPPER (BU)	
563	4-231-517-03	HOLDER (BU30)	
564	4-228-985-01	GEAR (PULLEY)	
565	4-228-997-02	GEAR (CAM)	
566	1-678-460-11	DRIVER BOARD	

Ref. No.	Part No.	Description	Remark
567	4-228-968-01	BELT	
568	4-228-998-01	GEAR (DETECTION)	
569	4-228-976-01	SLIDER (BU. R)	
570	1-678-461-11	MOTOR BOARD	
571	X-4952-971-2	MOTOR ASSY	
572	4-228-999-02	LEVER (MAIN. L)	
573	4-229-000-02	LEVER (MAIN. R)	
574	4-227-899-01	SCREW (DIA. 12), FLOATING	
575	4-229-003-01	PULLEY	
576	4-228-988-01	CHASSIS	
577	4-218-253-61	SCREW (M2.6), +BTTP	
578	4-218-253-71	SCREW (M2.6), +BTTP	
579	1-678-462-11	IN OUT SW BOARD	
580	1-678-463-11	DISC SENSOR BOARD	
M721	1-541-632-12	MOTOR, DC (LOADING)	

7-4. BASE UNIT SECTION (BU-30BD60)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
601	3-531-576-11	RIVET	
602	A-4725-531-A	BD BOARD, COMPLETE	
603	4-233-832-01	GEAR (LB)	
604	4-233-831-01	GEAR (LA)	
605	1-757-710-11	WIRE (FLAT TYPE) (16 CORE)	
⚠606	A-4735-188-A	BU-30 (60) ASSY	
#5	7-627-853-28	SCREW, PRECISION +P 2X3 TYPE3	

SECTION 8
ELECTRICAL PARTS LIST

BD

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4725-531-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C104	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C112	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C114	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C116	1-104-665-11	ELECT	100uF	20%	10V
C117	1-104-665-11	ELECT	100uF	20%	10V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C122	1-124-584-00	ELECT	100uF	20%	10V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C125	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C126	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C127	1-124-584-00	ELECT	100uF	20%	10V
C129	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C130	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C131	1-104-665-11	ELECT	100uF	20%	10V
C133	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C143	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C145	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C153	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C159	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C162	1-104-665-11	ELECT	100uF	20%	10V
C165	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C167	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C168	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C171	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C172	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C181	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C182	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C183	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C184	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C185	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C190	1-115-156-11	CERAMIC CHIP	1uF		10V
C191	1-124-584-00	ELECT	100uF	20%	10V
C192	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C193	1-104-665-11	ELECT	100uF	20%	10V
C194	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C195	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C196	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C198	1-124-584-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN101	1-568-864-11	CONNECTOR, FFC 21P			
CN102	1-793-907-11	CONNECTOR, FFC/FPC 16P			
		< DIODE >			
D101	8-719-422-12	DIODE UDZ-TE-17-3.9B			
		< FERRITE BEAD >			
FB101	1-500-445-21	FERRITE	0uH		
FB102	1-500-445-21	FERRITE	0uH		
		< IC >			
IC101	8-752-402-31	IC CXD3017Q			
IC102	8-759-827-41	IC BA5974FM-E2			
IC103	8-752-089-74	IC CXA2581N-T4			
		< SHORT >			
JR101	1-216-295-11	SHORT	0		
JR102	1-216-295-11	SHORT	0		
JR103	1-216-295-11	SHORT	0		
JR104	1-216-295-11	SHORT	0		
JR105	1-216-295-11	SHORT	0		
JR106	1-216-295-11	SHORT	0		
JR122	1-216-296-11	SHORT	0		
JR123	1-216-296-11	SHORT	0		
JR124	1-216-296-11	SHORT	0		
JR125	1-216-296-11	SHORT	0		
		< COIL >			
L101	1-469-553-21	INDUCTOR	4.7uH		
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-RT1		

BD DISC SENSOR DRIVER IN OUT SW MAIN

Ref. No.	Part No.	Description			Remark
Q102	8-729-920-85	TRANSISTOR	2SD1664-T100-QR		
		< RESISTOR >			
R101	1-216-049-11	RES-CHIP	1K	5%	1/10W
R102	1-216-097-11	RES-CHIP	100K	5%	1/10W
R103	1-216-077-00	RES-CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-049-11	RES-CHIP	1K	5%	1/10W
R106	1-216-049-11	RES-CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-11	RES-CHIP	1M	5%	1/10W
R111	1-216-099-00	METAL CHIP	120K	5%	1/10W
R114	1-218-745-11	RES-CHIP	160K	5%	1/16W
R116	1-216-001-00	METAL CHIP	10	5%	1/10W
R117	1-216-049-11	RES-CHIP	1K	5%	1/10W
R118	1-216-025-11	RES-CHIP	100	5%	1/10W
R119	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R120	1-216-077-00	RES-CHIP	15K	5%	1/10W
R122	1-216-097-11	RES-CHIP	100K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-11	RES-CHIP	100K	5%	1/10W
R131	1-216-033-00	METAL CHIP	220	5%	1/10W
R143	1-216-085-00	METAL CHIP	33K	5%	1/10W
R144	1-216-085-00	METAL CHIP	33K	5%	1/10W
R147	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-001-00	METAL CHIP	10	5%	1/10W
R158	1-216-083-00	METAL CHIP	27K	5%	1/10W
R159	1-216-083-00	METAL CHIP	27K	5%	1/10W
R162	1-216-097-11	RES-CHIP	100K	5%	1/10W
R171	1-216-081-00	METAL CHIP	22K	5%	1/10W
R172	1-216-081-00	METAL CHIP	22K	5%	1/10W
R173	1-216-081-00	METAL CHIP	22K	5%	1/10W
R181	1-216-081-00	METAL CHIP	22K	5%	1/10W
R182	1-216-081-00	METAL CHIP	22K	5%	1/10W
R183	1-216-081-00	METAL CHIP	22K	5%	1/10W
R190	1-216-033-00	METAL CHIP	220	5%	1/10W
R191	1-216-085-00	METAL CHIP	33K	5%	1/10W
R192	1-216-085-00	METAL CHIP	33K	5%	1/10W
R193	1-216-099-00	METAL CHIP	120K	5%	1/10W
R194	1-216-097-11	RES-CHIP	100K	5%	1/10W
R195	1-216-113-00	METAL CHIP	470K	5%	1/10W
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R198	1-216-295-11	SHORT	0		
		< COMPOSITION CIRCUIT BLOCK >			
RN101	1-233-576-11	RES, CHIP NETWORK 100			
		< VARIABLE RESISTOR >			
RV101	1-238-602-11	RES, ADJ, CARBON 47K			
		< VIBRATOR >			
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
	1-678-463-11	DISC SENSOR BOARD			
		**********			
		< PHOTO REFLECTOR >			
IC751	8-749-924-30	PHOTO REFLECTOR	GP2S28		(DISC IN DETECT)
		< RESISTOR >			
R751	1-249-407-11	CARBON	150	5%	1/4W
**********					
	1-678-460-11	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C701	1-124-261-00	ELECT	10uF	20%	50V
C705	1-124-261-00	ELECT	10uF	20%	50V
C706	1-164-159-11	CERAMIC	0.1uF		50V
C707	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN701	1-785-324-11	PIN, CONNECTOR (STRAIGHT) 12P			
CN702	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			
CN703	1-785-331-11	PIN, CONNECTOR (LIGHT ANGLE) 5P			
CN704	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P			
CN705	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P			
		< IC >			
IC701	8-759-598-69	IC	BA6956AN		
		< TRANSISTOR >			
Q701	8-729-029-66	TRANSISTOR	RT1N141S-TP		
		< RESISTOR >			
R701	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-249-401-11	CARBON	47	5%	1/4W
R705	1-249-435-11	CARBON	33K	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R707	1-249-429-11	CARBON	10K	5%	1/4W
**********					
	1-678-462-11	IN OUT SW BOARD			
		**********			
		< SWITCH >			
S741	1-771-821-11	SWITCH, PUSH (1 KEY) (IN)			
S742	1-771-821-11	SWITCH, PUSH (1 KEY) (OUT)			
**********					
	A-4725-658-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR/RESISTOR >			
C101	1-164-159-11	CERAMIC	0.1uF		50V
C102	1-164-159-11	CERAMIC	0.1uF		50V
C103	1-164-159-11	CERAMIC	0.1uF		50V
C116	1-249-417-11	CARBON	1K	5%	1/4W
C118	1-249-417-11	CARBON	1K	5%	1/4W

MAIN

Ref. No.	Part No.	Description			Remark
C122	1-161-494-00	CERAMIC	0.022uF		25V
C124	1-164-159-11	CERAMIC	0.1uF		50V
C125	1-126-923-11	ELECT	220uF	20%	10V
C251	1-161-494-00	CERAMIC	0.022uF		25V
C255	1-161-494-00	CERAMIC	0.022uF		25V
C260	1-161-494-00	CERAMIC	0.022uF		25V
C261	1-161-494-00	CERAMIC	0.022uF		25V
C301	1-126-959-11	ELECT	0.47uF	20%	50V
C302	1-162-600-11	CERAMIC	0.0047uF	20%	16V
C303	1-162-306-11	CERAMIC	0.01uF	20%	16V
C304	1-161-494-00	CERAMIC	0.022uF		25V
C310	1-161-494-00	CERAMIC	0.022uF		25V
C311	1-162-306-11	CERAMIC	0.01uF	20%	16V
C313	1-162-286-31	CERAMIC	220PF	10%	50V
C314	1-162-282-31	CERAMIC	100PF	10%	50V
C315	1-162-282-31	CERAMIC	100PF	10%	50V
C316	1-162-282-31	CERAMIC	100PF	10%	50V
C317	1-162-282-31	CERAMIC	100PF	10%	50V
C318	1-162-282-31	CERAMIC	100PF	10%	50V
C319	1-162-282-31	CERAMIC	100PF	10%	50V
C320	1-162-306-11	CERAMIC	0.01uF	20%	16V
C321	1-161-494-00	CERAMIC	0.022uF		25V
C401	1-161-494-00	CERAMIC	0.022uF		25V
C411	1-126-960-11	ELECT	1uF	20%	50V
C416	1-126-964-11	ELECT	10uF	20%	50V
C425	1-162-282-31	CERAMIC	100PF	10%	50V
C427	1-162-282-31	CERAMIC	100PF	10%	50V
C462	1-161-494-00	CERAMIC	0.022uF		25V
C463	1-126-964-11	ELECT	10uF	20%	50V
C498	1-161-494-00	CERAMIC	0.022uF		25V
C499	1-161-494-00	CERAMIC	0.022uF		25V
C500	1-164-159-11	CERAMIC	0.1uF		50V
C501	1-126-937-11	ELECT	4700uF	20%	16V
C513	1-126-935-11	ELECT	470uF	20%	10V
C521	1-164-159-11	CERAMIC	0.1uF		50V
C522	1-126-935-11	ELECT	470uF	20%	10V
C523	1-126-934-11	ELECT	220uF	20%	10V
C524	1-126-934-11	ELECT	220uF	20%	10V
C531	1-164-159-11	CERAMIC	0.1uF		50V
C532	1-126-935-11	ELECT	470uF	20%	10V
		< CONNECTOR >			
* CN101	1-568-419-11	PIN, CONNECTOR 9P			
CN102	1-568-373-11	PIN, CONNECTOR 8P			
CN103	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 5 TO TC-S3)			
CN301	1-568-838-11	CONNECTOR, FFC 21P			
* CN401	1-568-936-11	PIN, CONNECTOR 9P			
		< DIODE >			
D105	8-719-911-19	DIODE 1SS133T-72			
D123	8-719-982-96	DIODE MTZJ-T-72-2.2A			
D501	8-719-024-99	DIODE 11ES2-NTA2B			
D502	8-719-024-99	DIODE 11ES2-NTA2B			
D503	8-719-024-99	DIODE 11ES2-NTA2B			
D504	8-719-024-99	DIODE 11ES2-NTA2B			
D511	8-719-024-99	DIODE 11ES2-NTA2B			
D512	8-719-024-99	DIODE 11ES2-NTA2B			

Ref. No.	Part No.	Description			Remark
D513	8-719-024-99	DIODE 11ES2-NTA2B			
D514	8-719-024-99	DIODE 11ES2-NTA2B			
D515	8-719-024-99	DIODE 11ES2-NTA2B			
		< FERRITE BEAD >			
FB305	1-412-473-21	INDUCTOR	0uH		
FB310	1-412-473-21	INDUCTOR	0uH		
FB311	1-412-473-21	INDUCTOR	0uH		
FB312	1-412-473-21	INDUCTOR	0uH		
FB313	1-412-473-21	INDUCTOR	0uH		
FB314	1-412-473-21	INDUCTOR	0uH		
FB315	1-412-473-21	INDUCTOR	0uH		
FB410	1-412-473-21	INDUCTOR	0uH		
FB416	1-412-473-21	INDUCTOR	0uH		
		< IC >			
IC102	8-749-019-13	IC TOTX140 (OPTICAL OUT TO ST-S3/S5)			
IC401	8-759-827-46	IC M30620MAA-B31FP			
IC402	8-759-269-09	IC SN74HCT04ANS-E05			
IC502	8-759-158-62	IC TA78057S			
IC503	8-759-071-48	IC TA7807S			
		< RESISTOR >			
JW98	1-247-807-31	CARBON	100	5%	1/4W
JW99	1-247-807-31	CARBON	100	5%	1/4W
		< COIL >			
L125	1-410-336-11	INDUCTOR	220uH		
L310	1-410-467-11	INDUCTOR	5.6uH		
		< TRANSISTOR >			
Q501	8-729-049-79	TRANSISTOR	RT1P137S-TP		
Q502	8-729-900-80	TRANSISTOR	BA1A4M-TP		
		< RESISTOR >			
R123	1-247-807-31	CARBON	100	5%	1/4W
R132	1-247-876-11	CARBON	75K	5%	1/4W
R133	1-247-876-11	CARBON	75K	5%	1/4W
R134	1-249-417-11	CARBON	1K	5%	1/4W
R401	1-247-807-31	CARBON	100	5%	1/4W
R402	1-247-807-31	CARBON	100	5%	1/4W
R403	1-247-807-31	CARBON	100	5%	1/4W
R409	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-247-807-31	CARBON	100	5%	1/4W
R412	1-249-429-11	CARBON	10K	5%	1/4W
R413	1-249-411-11	CARBON	330	5%	1/4W
R417	1-249-429-11	CARBON	10K	5%	1/4W
R419	1-247-807-31	CARBON	100	5%	1/4W
R424	1-249-421-11	CARBON	2.2K	5%	1/4W
R425	1-249-425-11	CARBON	4.7K	5%	1/4W
R426	1-247-887-00	CARBON	220K	5%	1/4W
R427	1-249-425-11	CARBON	4.7K	5%	1/4W
R428	1-249-441-11	CARBON	100K	5%	1/4W
R429	1-247-807-31	CARBON	100	5%	1/4W
R430	1-247-807-31	CARBON	100	5%	1/4W
R432	1-247-807-31	CARBON	100	5%	1/4W
R433	1-247-807-31	CARBON	100	5%	1/4W

MAIN | **MOTOR** | **PANEL (L)** | **PANEL (R)** | **TRAY SENSOR**

Ref. No.	Part No.	Description			Remark
R435	1-247-807-31	CARBON	100	5%	1/4W
R436	1-247-807-31	CARBON	100	5%	1/4W
R437	1-247-807-31	CARBON	100	5%	1/4W
R438	1-247-807-31	CARBON	100	5%	1/4W
R440	1-247-807-31	CARBON	100	5%	1/4W
R441	1-249-429-11	CARBON	10K	5%	1/4W
R442	1-247-807-31	CARBON	100	5%	1/4W
R443	1-247-807-31	CARBON	100	5%	1/4W
R444	1-247-807-31	CARBON	100	5%	1/4W
R445	1-247-807-31	CARBON	100	5%	1/4W
R446	1-247-807-31	CARBON	100	5%	1/4W
R447	1-247-807-31	CARBON	100	5%	1/4W
R448	1-247-807-31	CARBON	100	5%	1/4W
R449	1-247-807-31	CARBON	100	5%	1/4W
R450	1-247-807-31	CARBON	100	5%	1/4W
R451	1-247-807-31	CARBON	100	5%	1/4W
R452	1-247-807-31	CARBON	100	5%	1/4W
R453	1-247-807-31	CARBON	100	5%	1/4W
R456	1-249-429-11	CARBON	10K	5%	1/4W
R457	1-249-429-11	CARBON	10K	5%	1/4W
R459	1-247-807-31	CARBON	100	5%	1/4W
R460	1-249-429-11	CARBON	10K	5%	1/4W
R465	1-249-407-11	CARBON	150	5%	1/4W
R469	1-249-407-11	CARBON	150	5%	1/4W
R473	1-249-407-11	CARBON	150	5%	1/4W
R477	1-249-407-11	CARBON	150	5%	1/4W
R480	1-249-441-11	CARBON	100K	5%	1/4W
R481	1-249-407-11	CARBON	150	5%	1/4W
R482	1-249-429-11	CARBON	10K	5%	1/4W
R483	1-249-429-11	CARBON	10K	5%	1/4W
R484	1-247-807-31	CARBON	100	5%	1/4W
R485	1-247-807-31	CARBON	100	5%	1/4W
R486	1-247-807-31	CARBON	100	5%	1/4W
R487	1-247-807-31	CARBON	100	5%	1/4W
R489	1-247-807-31	CARBON	100	5%	1/4W
R490	1-247-807-31	CARBON	100	5%	1/4W
R491	1-247-807-31	CARBON	100	5%	1/4W
R492	1-249-425-11	CARBON	4.7K	5%	1/4W
R493	1-249-407-11	CARBON	150	5%	1/4W
R494	1-247-807-31	CARBON	100	5%	1/4W
R495	1-247-807-31	CARBON	100	5%	1/4W
R496	1-249-429-11	CARBON	10K	5%	1/4W
R497	1-247-807-31	CARBON	100	5%	1/4W
R500	1-249-429-11	CARBON	10K	5%	1/4W
		< VIBRATOR >			
X401	1-781-107-21	VIBRATOR, CERAMIC (16MHz)			

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	1-678-461-11	MOTOR BOARD			
		**********			
		< CAPACITOR >			
C721	1-162-306-11	CERAMIC	0.01uF	30%	16V

****

Ref. No.	Part No.	Description			Remark
	1-680-995-11	PANEL (L) BOARD			
		**********			
		< LED >			
D701	8-719-057-97	LED SEL5923A-TP15 (❚❚)			
D702	8-719-058-03	LED SEL5423E-TP15 (►)			
D703	8-719-057-97	LED SEL5923A-TP15 (③)			
D704	8-719-057-97	LED SEL5923A-TP15 (②)			
D705	8-719-057-97	LED SEL5923A-TP15 (①)			
		< RESISTOR >			
R710	1-249-410-11	CARBON	270	5%	1/4W
R711	1-249-411-11	CARBON	330	5%	1/4W
R712	1-249-413-11	CARBON	470	5%	1/4W
R713	1-249-414-11	CARBON	560	5%	1/4W
R714	1-249-415-11	CARBON	680	5%	1/4W
R715	1-249-417-11	CARBON	1K	5%	1/4W
R716	1-249-418-11	CARBON	1.2K	5%	1/4W
		< SWITCH >			
S711	1-771-410-21	SWITCH, TACTILE (◄◄)			
S712	1-771-410-21	SWITCH, TACTILE (►►)			
S713	1-771-410-21	SWITCH, TACTILE (►►I)			
S714	1-771-410-21	SWITCH, TACTILE (I◄◄)			
S715	1-771-410-21	SWITCH, TACTILE (■)			
S716	1-771-410-21	SWITCH, TACTILE (❚❚)			
S717	1-771-410-21	SWITCH, TACTILE (►)			

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	1-680-996-11	PANEL (R) BOARD			
		**********			
		< RESISTOR >			
R700	1-249-410-11	CARBON	270	5%	1/4W
R701	1-249-411-11	CARBON	330	5%	1/4W
R702	1-249-413-11	CARBON	470	5%	1/4W
R703	1-249-414-11	CARBON	560	5%	1/4W
R704	1-249-415-11	CARBON	680	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W
R706	1-249-418-11	CARBON	1.2K	5%	1/4W
R707	1-249-420-11	CARBON	1.8K	5%	1/4W
		< SWITCH >			
S701	1-771-410-21	SWITCH, TACTILE (DISC 3)			
S702	1-771-410-21	SWITCH, TACTILE (DISC 2)			
S703	1-771-410-21	SWITCH, TACTILE (DISC1)			
S704	1-771-410-21	SWITCH, TACTILE (⏏ (DISC 1))			
S705	1-771-410-21	SWITCH, TACTILE (⏏ (DISC 2))			
S706	1-771-410-21	SWITCH, TACTILE (⏏ (DISC 3))			
S707	1-771-410-21	SWITCH, TACTILE (REPEAT)			
S708	1-771-410-21	SWITCH, TACTILE (PLAY MODE)			

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	1-678-457-11	TRAY SENSOR BOARD			
		**********			
		< CAPACITOR >			
C731	1-164-159-11	CERAMIC	0.1uF		50V

TRAY SENSOR

Ref. No.	Part No.	Description			Remark
		< PHOTO SENSOR >			
IC731	8-749-081-01	PHOTO SENSOR	DG-264		
IC732	8-749-081-01	PHOTO SENSOR	DG-264		
IC733	8-749-081-01	PHOTO SENSOR	DG-264		
		< RESISTOR >			
R731	1-247-876-11	CARBON	75K	5%	1/4W
R732	1-249-408-11	CARBON	180	5%	1/4W
R733	1-247-876-11	CARBON	75K	5%	1/4W
R734	1-249-408-11	CARBON	180	5%	1/4W
R735	1-247-876-11	CARBON	75K	5%	1/4W
R736	1-249-408-11	CARBON	180	5%	1/4W
**********					
		MISCELLANEOUS			
		**********			
9	1-823-055-11	WIRE (FLAT TYPE) (21 CORE)			
11	1-757-633-11	CORD (WITH CONNECTOR) 17P			
571	X-4952-971-2	MOTOR ASSY			
605	1-757-710-11	WIRE (FLAT TYPE) (16 CORE)			
⚠606	A-4735-188-A	BU-30 (60) ASSY			
M721	1-541-632-12	MOTOR, DC (LOADING)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.04	New